

National Safety News



NOVEMBER 1952

Off for the Sea Harvest

THIS MONTH

Conditioning for Retirement
When Mines Work Together
Progress with Color

The NEW M·S·A GASFOE

RESPIRATOR—

Gets on the GOOD SIDE
of workers

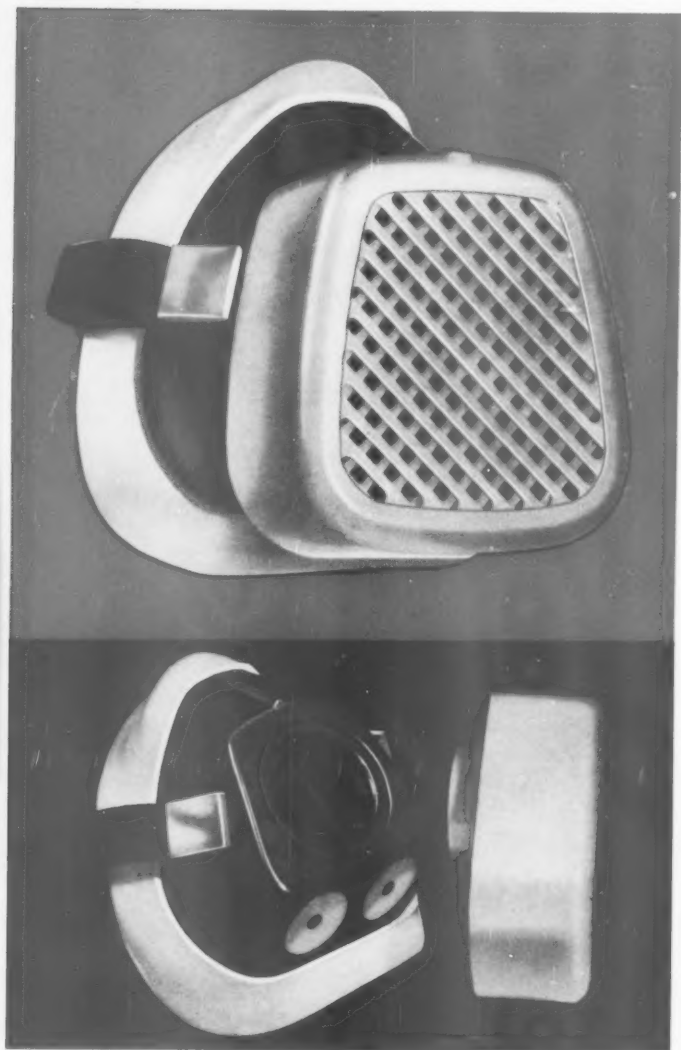
Keeps workers on the
SAFE SIDE of hazards

**For nuisance exposure to
light concentrations of
organic vapors and acid gases**

Because it gives workers what they want in respirator comfort and protection, the new M.S.A. Gasfoe is tops in acceptance value. It's light, good-looking, compact. There are no distracting corners or edges to block vision; the "closed in" feeling that hinders worker comfort and efficiency is eliminated. The filtering action of the cartridge keeps the worker safe.

It's designed for economy, too. All parts are independently replaceable. In seconds you can replace any element that has worn out after extended service and send a good-as-new respirator back to the job. Our bulletin gives complete facts. Write for it today.

- ✓ Smart, modern design combats workers' resistance to respirator protection
- ✓ So light, users hardly know they're wearing it
- ✓ Compact, streamlined design gives greater job vision, comfort
- ✓ Replaceable parts bring economy, longer service life
- ✓ Easily changed, factory-packed cartridges assure peak protection



M·S·A
SAFETY EQUIPMENT HEADQUARTERS
M·S·A

Call the M.S.A. man on your every safety problem . . .
His job is to help you.



MINE SAFETY APPLIANCES COMPANY

BRADDOCK, THOMAS AND MEADE STS., PITTSBURGH 8, PA.

At Your Service: 68 Branch Offices in the United States

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Toronto, Montreal, Calgary, Winnipeg, Vancouver, New Glasgow, N.S.
Representatives in Principal Cities in Mexico, Central and South America
Cable Address "MINSAP" Pittsburgh

WILLSON
plastic protective
equipment

WILLSON MONOGOGGLES®



Keep you on the safe side

Workers wear Willson protective equipment willingly because these MonoGoggles® and other safety devices shown are lightweight and comfortable. MonoGoggles® illustrated above are available in flexible Polythene and fully transparent Acetate for extra side vision. Interchangeable lenses in clear plastic or Tru-Hue green. Ask for Willson—the leading line of respiratory and eye safety equipment for industry, farm and home use.

Choice of clear
or green plastic
visors



**WILLSON
PROTECTO-SHIELD®**

gives full face protection with a choice of 4", 6" and 8" visors. Ideal for many industrial operations. Also available with full flare at sides for extra protection against chemical splash.



Weight:
less than
an ounce!

WILLSON FEATHERSPEC®

... specially designed for light-duty operations. Comfortably worn over prescription glasses. Their clear or Tru-Hue green plastic lenses can be switched in a few seconds.

**For prompt safety service
CONSULT YOUR . . .
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Ottawa, Edmonton, Vancouver, Halifax

See your WILLSON distributor or write for bulletin
WILLSON PRODUCTS, INC., 205 Washington St., Reading, Pennsylvania



THE COVER:

*They that go down to the sea in ships;
They that do business in great waters,
These see the works of the Lord
And his wonders in the deep.*

Psalm 107-23, 24.

The Gertrude L. Thebaud, of the North Atlantic fishing fleet, puts out to sea.
(Photo by Cy La Tour & Son)

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RALPH MOSES, *Art Director* C. H. MILLER, *Advertising Manager*

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anti-freeze



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Handsome, heavy-duty field boot with oil-resistant Neoprene composition soles, moisture-tight caulk welt, tough Dacron stitching.

*T.M. REG.

LEITCH
QUALITY SHOE COMPANY
ALLENTOWN, PA.



Keep Them **CLEAN** with... **SIGHT SAVERS** the Dow Corning **SILICONE** treated tissues

QUICKEST AND EASIEST WAY TO CLEAN GLASSES

Like modern car polishes, Sight Savers contain a Dow Corning Silicone product that simplifies cleaning and polishing; gives added clarity and luster to glass; keeps dirt and oil from sticking to lenses.

MAKE EYE SAFETY PROGRAMS MORE EFFECTIVE

Attractive Sight Saver Cleaning Stations encourage employees to keep their glasses clean; remove the best excuse they give for not wearing safety glasses.

Install **SIGHT SAVER** Cleaning Stations

INCREASE PRODUCTION, IMPROVE QUALITY

Employees work more rapidly, more accurately and with less eye fatigue when their glasses are Sight Saver clean. Sight Saver tissues are the most convenient size to use; contain exactly the right amount of the right kind of silicone; save time wasted on less effective cleaning methods.

INEXPENSIVE TO INSTALL AND MAINTAIN

Adhesive mounting strips supplied for easy installation on metal, wood, glass or tile walls. Foolproof dispenser eliminates waste, issues a single 3" x 7" tissue at a time. No maintenance required. Simply insert refill packets as required.

PREFERRED BY MILLIONS OF PEOPLE

Sight Saver Cleaning Stations are specified by most Safety Directors because the superiority of Sight Saver tissues has been proved by world-wide distribution and repeated use by millions of people.



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from leading Safety Supply Houses

Cat. No. 60 Black Dispenser.....\$2.50
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contains 800 tissues...\$1.45

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MACHINE SHOP



WELDING SHOP



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COPPUS

"BLUE
RIBBON"

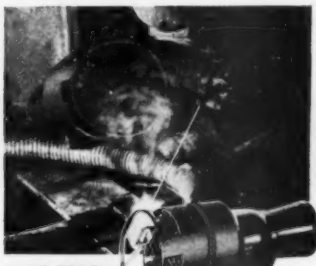
VENTILATORS

Used in wide variety of
applications throughout industry

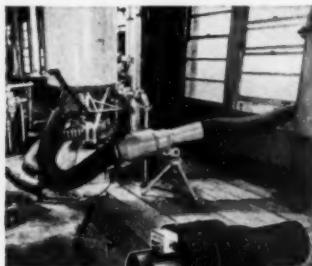
Improve workers' safety ...
health ... comfort ... efficiency



VANO DESIGN "A" VENTILATOR is used here during repairs to a chemical still. This type ventilator is used to ventilate tanks, tank cars, drums, vats, underground cable manholes, pipe galleries, airplane wing compartments, fuselages and other confined places. Uses 8" diameter flexible canvas tubing ("Ventube").



VANO DESIGN "B" VENTILATOR here discharges welding fumes from double-bottom compartment in naval vessel under construction. Large volume of air handled quickly expels fumes and results in good ventilation. Vano Design "B" can pass through opening only 14" in diameter. Uses 8" diameter flexible canvas tubing ("Ventube").



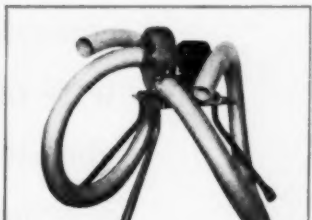
VANO DESIGN "C" VENTILATOR here withdraws fumes from a reactor kettle. This ventilator can be furnished with 8" suction inlet for 8" non-collapsible suction tubing—or multiple inlet nozzles for 5", 4", and 3" suction hose. The discharge may be connected to 8" "Ventube." Capacities furnished on request.



NO. 2 AEROPLANE HEAT KILLER here directs cool, fresh air on worker in drop forge plant. Heat killers restore workers' efficiency by providing extra ventilation in the hot months, or on any job where workers are continually or periodically required to work in excessive heat. Available in two types, three sizes in each.



VENTAIRE DESIGN TE-4 VENTILATOR Gasoline Engine Driven, here delivers air into underground manhole. These ventilators provide fresh air to men in confined places, promoting safety, comfort, and increasing efficiency. Ideal where no electric current is available. Delivers 1700 CFM of fresh air. Uses 8" diameter flexible canvas tubing ("Ventube").



PORTAIR NO. 4 BLOWER EXHAUSTER exhausts fumes resulting from soldering, welding, tank coating, is also used in ventilating small tanks. It is designed to permit attachment of 4" flexible metal hose. Capacity: 425 CFM free air.

ATTACH THIS COUPON TO YOUR COMPANY LETTERHEAD

COPPUS ENGINEERING CORPORATION, 131 PARK AVENUE, WORCESTER 2, MASS. Sales offices in Thomas' Register. Other "Blue Ribbon" Products in Chemical Engineering Catalog, Refinery Catalog, Best's Safety Directory and Mining Catalogs.

Please send me information on supplying fresh air to men working:

- ☐ in tanks, tank cars, drums, etc.
☐ in underground cable manholes
☐ in aeroplane fuselages, wings, etc.
☐ on cake ovens
☐ on steam-heated rubber processes

☐ on boiler repair jobs

COOLING:

- ☐ motors, generators, switch-boards
☐ wires and sheath
☐ general man cooling

- ☐ around cracking stills
☐ exhausting welding fumes stirring up stagnant air wherever men are working or material is drying
☐ drying of walls, sheath, etc., after treated with coating material

Name
Company.....
Address.....
City.....Zone.....State.....

Write here any special ventilating problem you may have {

One OF WINGUARDS

On January 31, 1952, one of the country's outstanding metallurgical research laboratories was commissioned to make comparative strength tests on safety box toes, with testing specimens and testing methods in compliance to ASA specifications. The averaging of their compression and impact testing figures certifies WINGUARD 400 and 500 to be 45+% stronger – and safer –

$\overline{\text{M}}$ is the
Roman numeral
for the quantity million.
As concerns WINGUARDS
the figure should actually
be $\text{II } \overline{\text{M}}$ since there
are two toes
to a pair.



million pairs *safest* **STEEL BOX TOES**

than non-wing types otherwise related in height, profile and contour.

WINGUARD 400—"dress" type usually used in oxfords.

WINGUARD 500—"work" type used in more rugged shoe constructions.

We feel this clinical proofing of their superior safety advantages is undeniably linked to the fact that on July 30th, we shipped the millionth pair of WINGUARDS.

In case #6913, B/L 28872, P.O. #A1127, Production Order B-11888, consigned to Daoust, Lalonde Inc., Montreal, P. Q., Canada.

— one of the forty-eight safety shoe manufacturers in the United States and Canada licensed to use WINGUARD steel safety box toes.

STONEHOUSE SIGNS For ACCIDENT PREVENTION



WHERE Hy-VOLT LIVES ...Watch Out!

He's the giant Electricity...his punch is power-packed. For while he serves virtually every industrial need, it is only with great care that workers should approach or touch him.

Safeguard your men and women against Electrical hazards by educating and warning them to beware of Hy-Volt's punch...with

STONEHOUSE SIGNS

Use them to warn against these dangers. There are many Stonehouse stock-worded "Electrical Hazards" signs, for Accident Prevention. Special wordings produced to specifications.

Send for our complete Catalog...in full color...free on request.



Stonehouse

SIGNS, inc. MANUFACTURERS • Stonehouse Bldg., 9th at Larimer
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"Signs Since 1863"



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THE SAF-I-FLEX

WITH GRID VENTS AND REPLACEABLE LENS

FRAME

- Crystal Clear VINYL frame permits wide-angle side vision—Velvet Soft—Fits contour of all faces snugly. Inside edge of frame rolled for more comfort and better fit. Generous grid vents for full ventilation.

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- Optilite [®] Lens meets Federal Spec. for optical qualities and impact resistance — available in Crystal Clear or Green.
- Lens quickly and easily replaced — locks securely in frame.
- Extra-large lens area — Fits over most styles of personal glasses.



the SAF-I-QUADS



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THE SAF-I-SHIELD



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In Canada PARMELEE, LTD. Toronto

G-11[®] (brand of hexachlorophene)

*the first and
only proven, effective and non-irritating
antiseptic chemical for soaps*

Protect your workers and help reduce absenteeism by specifying for your washroom dispensers, soap containing G-11.

Secondary infection is often associated with occupational dermatitis, resulting from cutting oils, solvents, minor cuts, etc.

The antiseptic properties of G-11

soaps and detergents will maintain a low bacteria count on the skin of the hands and forearms, and will help combat this health problem.

Proved by years of safe, successful use, these soaps achieve remarkable reductions in bacteria count of the skin. They are especially essential for food handlers in hospitals, plants, and other institutions.

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ELMIRA · NEW YORK · U.S.A. Corporation

11

FOR WHATEVER YOU DO...

there's a Dorsey
SAFE-T-SHOE



NO. 4900
A handsome shoe of finest quality
for style, comfort and safety.



The PARATHOOPER
No. 6450

Genuine oil tanned for comfort, looks and long wear.



Dorsey **SAFE-T-SHOE**

Dorsey **SAFE-T-SHOE**

The Dorsey Safe-T-Shoe SAFELY
"KEEPS YOU **ON** YOUR FEET"

A variety of styles are available, from expertly finished calfskin oxfords, to heavy duty horsehide work shoes—designed with full leather vamp and steel arch support to keep you comfortable for long hours of standing. . . . The properly selected sole for your type of floor hazard can be obtained from our stock. DACRON stitching, the new wonder thread that is resistant to acids and alkalis and with magical wearing qualities, make Dorsey the best buy in safety shoes.



The CHAMPION
No. 4540

Genuine triple tanned horsehide, soft, pliable and rugged.



For rough industrial uses where a dress shoe does not belong, Dorsey goes all-out for comfort and long-wearing durability which comes with the use of the finest leather and workmanship.

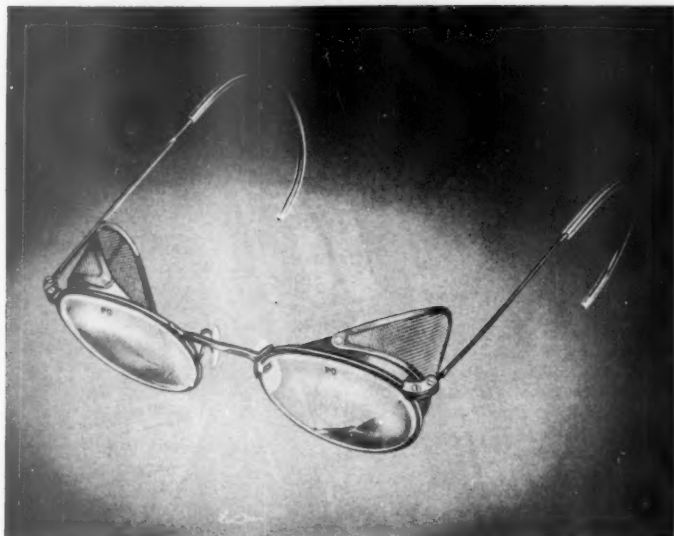
Dorsey **SAFE-T-SHOE**

THE MOST COMPLETE LINE OF
INDUSTRIAL FOOTWEAR! WRITE
TODAY FOR ILLUSTRATED FOLDER.



DORSEY SAFE-T-SHOE COMPANY • CHATTANOOGA, TENNESSEE

PENNSYLVANIA OPTICAL COMPANY



**ANNOUNCES
ITS NEW
LINE OF
SAFETY
GOGGLES!**



The 220 Series Goggles

The new 220 Series Goggles are designed to give the utmost in eye protection. Comfort is assured during continued wear by proper balance combined with lightness of weight. This results in worker approval and a higher factor of safety. Varied combinations make these goggles adaptable to many industrial operations requiring positive eye protection.

- ★ Metal construction combines comfort with strength and long life.
- ★ Designed to permit unobstructed side to side vision.
- ★ Heat treated safety lenses, individually tested for impact resistance, and examined for optical perfection.
- ★ Flat or curved lenses—either clear or absorptive green in medium, dark and extra dark shades.
- ★ Many combinations of side shields, lens sizes and bridge widths.

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**Order Direct
and Save!**

PENNSYLVANIA OPTICAL COMPANY
READING, PA.

Known for Fine Ophthalmic Products Since 1886.

Superstitious



....about walking under a ladder?

Take the case of Joe Cluck:

Walked under a ladder on the way to work. Ten minutes later, he went top over teakettle on the slippery floor of the outer office. All the way to the hospital he kept blaming the ladder.

It so happened that Joe Cluck was slip-fall victim #41 of those same shiny floors. It also happened that, once LEGGE Safety Maintenance was introduced in Joe's building, accidents of this type stopped. Because LEGGE goes after the *real reason* behind such accidents.

LEGGE Safety Polishes give you floors that gleam without slipperiness. Their safety factor goes 75%

beyond Underwriters' Laboratories requirements. And buffing actually *increases* their slip-resistance.

The LEGGE System lops a big chunk off your expense sheet, too. It does away with the endless and costly cycle of stripping, rewaxing, etc.

No amount of voodoo can ward off accidents. There is no magic about LEGGE Safety Floor Maintenance. *Safety is our business.* It will pay you to call in a LEGGE Safety Engineer today. Walter G. Legge Company, Inc., 101 Park Ave., New York 17, N. Y. Branch offices in principal cities. In Toronto—J. W. Turner Co.



This adv. is one of a series based upon pet superstitions. If you'd like a reprint for your files, just fill out and mail the coupon.

Walter G. Legge Company, Inc.
101 Park Ave., New York 17, N. Y.

N-11

- ☐ Please send a reprint of this advertisement.
- ☐ Have a Legge Safety Engineer phone me for an appointment.
- ☐ Send me your FREE booklet, "Mr. Higby Learned about Floor Safety".

Name

Firm

Street

City Zone State

ENGINEERED FOR ANY FIRE HAZARD

SPLIT-SECOND ACTION!

A Blaw-Knox Automatic Sprinkler or Fog System engineered for the fire hazards in and around a plant is industry's most effective weapon against ruinous fires. On the job 24 hours a day, dousing fires *at their start*, sounding alarms, closing safety doors... all with the speed of electricity. Glad to consult with you and submit an estimate without obligation.

BLAW-KNOX SPRINKLER DIVISION

OF BLAW-KNOX CONSTRUCTION COMPANY
829 Beaver Ave., N.S., Pittsburgh 33, Pa.

Offices in Principal Cities

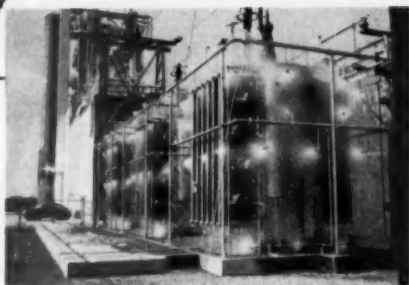
Deluge Systems, Wet Pipe Systems, Dry Pipe Systems, Water Spray and Fog Systems, Rate-of-Rise Sprinkler Systems, Foam and Carbon Dioxide Extinguisher Systems... all carry Insurance Underwriters Approval.

"LITTLE JOEY SPRINKLER"

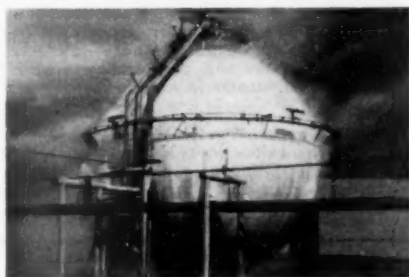
Always on the Job



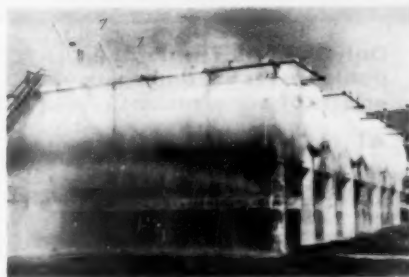
BLAW-KNOX



HOLDING TRANSFORMER FIRES TO A MINIMUM



COOLING OFF CHEMICAL "HOT HEADS"



PROTECTING FLAMMABLE GASES

HY-TEST

the ONLY Safety Shoes with

Bol Tan

Sweat-resistant Leather Insoles!

ADD UP TO TWICE THE WEAR!

No other safety shoe offers the benefits of the exclusive, new *Bol Tan* sweat-resistant leather insole. HY-TEST Safety Shoes now increase worker comfort and productiveness with *Bol Tan* leather insoles in every pair.

The life of any shoe depends on the insole. That's why *Bol Tan* sweat-resistant leather insoles extend shoe life as much as 100%, because they withstand the damaging effects of foot perspiration.

This means that your workers and all wearers of safety shoes can increase the value of their purchases and be more comfortable while at work when they buy and wear HY-TEST SAFETY SHOES.



H734-4
Men's Black Oxford Shoe. The shoe features a leather insole, leather outsole, leather heel, leather toe cap, leather protector, leather sole, leather insole, leather sole, leather sole, leather sole.



H713-3
Men's Black Glove Blucher, Hecord and sole, Hecord Oil midsole, Hecord heel, Anchor Flange Steel Box Toe, Protector Last, Bol Tan leather insole.

Only the *Bol Tan* leather insole resists the damaging effects of perspiration!

AT NO EXTRA COST!

Here are two insoles from a single pair of shoes worn in a foundry for seven months. The one from the left shoe is a *Bol Tan* leather insole; the other is a regular quality leather insole.



Note the *Bol Tan* leather insole is still soft and pliable, shown by cut section lifted for inspection! Ordinary insole is cracked, curled, saw-edged... dried out and damaged by perspiration attack!

The *Bol Tan* leather insole stays comfortable, permits re-soles when ordinary insole would have failed!

Ordinary insole is unfit for further wear causing discard of shoe long before uppers are worn out.



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Ten Years of—What?

THE 40th National Safety Congress has been held, and organized safety is now on the 10-year lap that will bring it to the half-century mark.

What is ahead? What will the record show on the Golden Anniversary?

I am optimistic about the answer. I believe the next decade will be the best safety has ever had. I believe it will literally be the golden era that will bring us to the golden anniversary.

Why do I believe this? There are a number of reasons. One is the tone and spirit of the Congress we have just held. In my opinion, it was the best I have ever attended, from every viewpoint. Another reason is the mounting evidence that the public finally is awakening to the accident problem and the need for general participation in the effort to solve it.

But the biggest reason for believing that the safety movement really is marching is the steadily increasing cooperation that is evident on every side. The safety movement is achieving real teamwork—and I firmly believe, and have always believed, that teamwork is the real answer to reducing the accident toll.

I think the 40th Congress was a real milestone in the safety movement because it pointed up dramatically the broader conception of cooperation that safety leaders are now achieving. The insistence on this new concept was to me the outstanding feature of the Congress. I heard it on all sides, and it was fine to hear it.

I believe that in the next 10 years we not only will see a closer cooperation among safety organizations themselves, but I believe we will see a closer bond between safety organizations and other organizations whose primary purpose is not safety, but who do include accident prevention as one part of their programs.

By the time we celebrate our golden anniversary of the safety movement in 1962, I believe that we will be enjoying a nationwide unity in the attack on accidents that will cause us to regard with astonishment the earlier concept of the problem that permitted us to go our individual ways without much regard for the other fellow.

I hope everyone who attended the Congress was inspired not only to do a better safety job in his own sphere of operations, but to carry into his work this new and broader concept of cooperation that I believe will mean all the difference in the world in our efforts to prevent accidents.

Ned H. Dearborn

when mines



work together

COOPERATION in safety by mining companies throughout the Lake Superior Region is probably unexcelled by any other group of similar companies in any industry. These mining companies working together, as well as with the local and federal government mining agencies, employee safety committees, equipment manufacturers and organizations interested in mining safety, have produced a remarkably high standard of safety in the District.

**Through the Lake Superior Mines Safety Council
member companies are making new safety records**



Modern equipment is used on the Mesabi Iron Range. Dragline has capacity of 2000 cu. yds. per hour and is removing overburden from iron ore deposit.



Trucks dump ore into pocket and conveyor belt carries it to cars for shipment to lake docks.



No work is done beyond the timber until the back has been scaled.

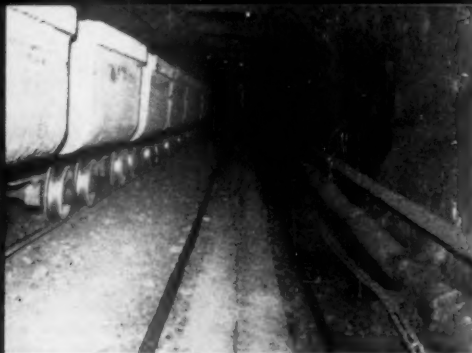
The frequency and severity of injuries are sharply lower than the averages for the mining industry as a whole. In fact, many mines have records that compare favorably with the records of plants in low hazard industries. Underground and open pit mines regularly establish new high marks in the number of man-hours worked without a disabling injury. The first open pit operation of any type in the United States to work more than 2,000,000 injury-free man-hours was a Minnesota mine.

The coordinating organization for mutual efforts by the mining companies and the other agencies, is the Lake Superior Mines Safety Council. It has the full backing of the managements of the companies. They support the Council financially and their safety engineers take an active part in the work of the Council. Superintendents, foremen, and workmen are given time away from the job to attend the meetings of the Council and to participate in its activities by preparing papers, models of safety devices for exhibition, and otherwise assist in the general safety program.

Lake Superior mining companies also take an active part in solving the safety problems of the mining industry as a whole. All members of the Lake Superior Mines Safety Council, with few exceptions, are members of the Mining Section of the National Safety Council. For many years Lake Superior mines safety engineers have been leaders in the work of the Mining Section and company officials have often given papers before the Mining Section at the Annual Congress and Exposition.

Close cooperation in the Lake Superior Region began in 1919 at a small meeting of safety men from 19 companies, county and federal mine inspectors and representatives from safety equipment companies and similar organizations. The group continued to meet and expand, and by 1929 attendance at the annual meeting in Duluth reached 274.

Today the influence and pres-



A plank walk provides a safe and easy passage in a Michigan Mine.



Communication and signaling systems are important aids to safe and efficient operation.



Goggles are worn by both surface and underground employees.



Neat piling of materials is a feature of the housekeeping in underground operations.



This device for changing heavy tires is typical of equipment for making work safer and easier.



The Lake Superior Mines Safety Conference is a source of new ideas contributed by members.

tige of the Council is as great as ever but safety men play a small role at meetings. The attendance at the meetings is predominantly operating people, ranging from company executives and supervisors of all grades to workmen. The programs also are largely by and for them. Due to the increased participation and attendance by operating personnel, the 1952 attendance at the two-day general meeting in Duluth reached a new high mark—815, making the Duluth Safety Conference one of the outstanding ones in the country.

During the year one-day meetings are held monthly in various mining localities in Michigan, Wisconsin and Minnesota. These meetings also are largely attended by superintendents and other supervisory personnel from nearby mines. Local safety men prepare the program and make arrangements for the meeting.

The broad participation of key operating personnel in the safety activities of the Council has been a major factor in getting interest and support for concrete safety measures on the job. An effective eye protection program is difficult to achieve in any industry, and the mining industry, where the frequency of eye cases is relatively high, is no exception.

However, the wearing of goggles by surface and underground employees is firmly established in

the mines of the Lake Superior area. Only two disabling eye cases occurred during a recent year in all the mines as the result of unified action. Twenty years ago one large company alone had 51 disabling eye injuries in a year.

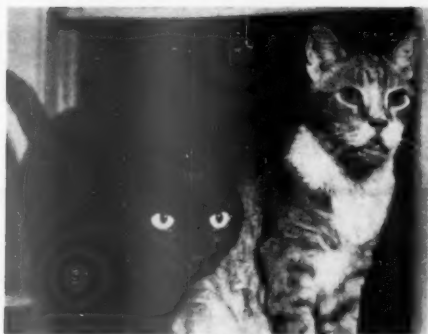
The interchange of accident data and preventive information, sponsored by the Council with the agreement of company managements, also has been an important factor in the uniformly high standard of safety throughout the district. The details of accidental injuries are circulated monthly among members for their information in preventing similar accidents. Statistics are compiled, analyzed and compared annually by a member of the Council and the information is available to all.

The development of safety devices, and safety improvements in the design and construction of tools and equipment is publicized extensively. Each company makes models or takes pictures of its safety developments and exhibits them at the Annual Duluth Conference for others to see and adopt. At a recent conference about 250 safety ideas were exhibited.

These, and other equally substantial accomplishments, are the dividends from a cooperative safety policy in a segment of an industry noted for rugged individualism.

Officers of Lake Superior Mines Safety Council, 1952-53. Left to right: J. A. Johnson, secretary; R. F. Wilson, vice-president; Al Kolu, president; E. W. R. Butcher, treasurer.





"Holy mackerell! The chances some people take!" (Philip Gendreau)



"Every suggestion is given careful attention by competent engineers." (Acme Newspictures)

Almost Human!

MANY YEARS ago an English cartoonist named Louis Wain turned out an enormous number of cartoons featuring cats indulging in human antics. Many other artists have used animals to portray common human types and situations.

More recently photographers have been using domestic pets and residents of the zoo to get similar effects, and volumes of these pictures have been published. These candid shots of animals suggest certain types of people and are effective caricatures of human foibles.

The animal world now faces the problem of accident prevention in *Safety Zoo*, one of the funniest publications in safety. Everyone who has ever been a member of a safety committee or attended a safety meeting will recognize some of his fellow workers—perhaps even himself—in the harried and earnest (and sometimes bored) creatures that inhabit this zoo.

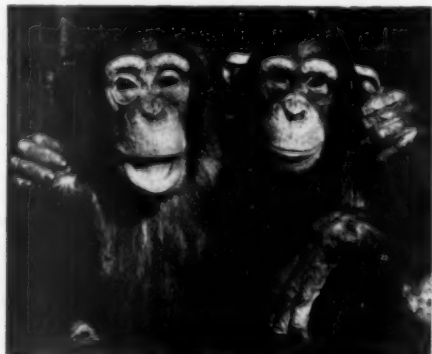
With more than 30 pages of pictures with clever captions, this booklet offers something new in publications for employees. No one can start reading it without finishing it.



"I won't work here if I have to wear a hair net." (Ylla photo)



"You'd think the company would buy a few salt tablets." (Ylla photo)



"... And for his outstanding safety performance it gives me great pleasure to present this award..." (Ylla photo)

40th Safety Congress

Record attendance indicated by early registration. Teen-ager and insurance executive address Annual Meeting

With a background of 40 years of substantial achievement since the first Safety Congress met in Milwaukee in 1912, the 40th National Safety Congress and Exposition convened in Chicago, Monday morning October 20. But dominating any satisfaction over the accomplishments of the past was the sobering realization of the problems ahead, of staying alive in an age of increasing mechanical complexity and of maintaining freedom in a world menaced by strange doctrines and totalitarian dictators.

"There will always be unfinished business," President Ned H. Dearborn reminded delegates at the Annual Council Meeting which opened the Congress. Anyone who sees nothing more to do, who has nothing to live for except creature comforts is as good as dead.

"And any organization that basks in the past, that fails to foresee at least some of the problems of the future, is worse than dead."

The Annual Meeting was called to order in the Grand Ballroom of the Conrad Hilton Hotel as registration desks at five Chicago hotels were jammed with delegates from all over the U. S. A. and Canada and a few from other countries. The Monday morning crowd at the registration desk of the Hilton indicated that the expected attendance of 12,000 might be exceeded.

In the business meeting preceding the addresses, the slate of officers and board members presented by Dr. K. Frances Scott on behalf of the nominating committee, was unanimously accepted.

E. F. duPont, director, Employee Relations Department, E. I. du Pont de Nemours & Co., Wil-

mington, Del., was elected chairman of the Board of Directors, succeeding Charles R. Cox.

Ned H. Dearborn continues as president of the Council and Lee Warren James as chairman of the Trustees.

New vice-presidents for the coming year are:

For Finance, and Treasurer—George F. Getz, Jr., president of the Globe Corp., Chicago.

For Homes—W. A. Stewart, president, American Optical Company, Southbridge, Mass.

For Industry—Dr William P. Yant, director of research and development, Mine Safety Appliances Company, Pittsburgh.

For Membership—Robert T. Ross, manager, employee services, Ford Motor Company, Dearborn, Mich.

For Traffic and Transportation—Franklin M. Kreml, director, Traffic Division, International Association of Chiefs of Police, Evanston, Ill.

For Women's Activities—Miss Marion E. Martin, Commissioner of Labor, State of Maine.

Other officers were re-elected.

A complete list of officers, directors and trustees elected at the Congress will be found on page 26.

Youth Speaks Up

Franklin M. Kreml, vice-chairman of the Council's Board of

NEXT YEAR

The 41st National Safety Congress and Exposition will be held in Chicago, October 19-23. The Conrad Hilton will again be the headquarters hotel.

Directors and newly-elected vice-president for traffic and transportation, presided at the Annual Meeting in the absence of Charles R. Cox. It was Mr. Kreml's pleasant duty to introduce the first speaker, Doris Jean Anderson, a 17-year-old high school senior from South Sioux City, Nebr.

Miss Anderson, a leader in 4-H Club activities in her home community, recently won first place in a 4-H statewide public speaking contest, using safety as her subject. This year she was selected as her high school homecoming queen.

Many in the audience, no doubt, were attracted by the novelty of a teen-ager in a Congress program spot usually reserved for a woman of national prominence. But all were impressed—and charmed—by her poise and her earnestness and enthusiasm as she made a spirited defense of youth and a plea for more and better instruction in safety.

At the close of her talk, Chairman Kreml presented Miss Anderson with a handsome wrist watch bearing the Green Cross emblem on the band.

A Motivating Force

"The keystone of our American way of life has always been our belief in the value of the individual," Jesse W. Randall, president of the Travelers Insurance Companies, told the meeting. "That is why we despise tyranny. That is why we hate war. That is why we devote millions to medical research.

"That is why the National Safety Council was founded. And that is why it is so appalling to

Opens

realize the wanton waste of life that is caused by accidents each year. A major portion of the financial loss is borne by private insurance companies. And as an insurance company president I feel that we have not even scratched the surface in our knowledge of the causes of accidents, in our understanding of their prevention, and in our techniques and facilities of educating Americans in the ways of safety."

On Monday morning the Industrial Safety Exposition, larger and more comprehensive than ever, opened its doors. All exhibits were held in the Conrad Hilton this year, all available space on three floors being occupied.

Pre-Congress Activities

Many delegates had spent four busy days at the Congress before its official opening. The annual Conference of Safety Council Managers held sessions Friday and Saturday. The Industrial Conference met Sunday to review the progress made by the Council's industrial sections and to plan programs for the coming year.

Dr. William P. Yant, for several years vice-chairman of the Conference, was elected chairman. In recognition of valued service to the National Safety Council, President Dearborn presented certificates to George A. Jacoby, General Motors Corp., for several years chairman of the Conference; to E. W. Kempton, U. S. Steel Co., retiring chairman of the Council's Membership Committee, and to Fred W. Braun, Employers Mutuals, for the past two years chairman of the Conference.

Early in October an expanded program of radio and television

In This Issue . . .

BECAUSE the presses are waiting, coverage of the Congress must stop with the Annual Meeting on Monday morning. More next month. A list of officers, directors and trustees elected for the ensuing year will be found on page 26.

In the three states bordering on Lake Superior, a unique safety organization, the Lake Superior Mines Safety Council, has been carrying on an aggressive and effective program for many years, with participation reaching up to management levels. In an industry noted for rugged individualism these mining companies have been working together, sharing experiences and reducing accidents. (Page 18)

Everyone over 40 is thinking about retirement. To some it brings pleasant thoughts of leisure and adventure; to others it is a haunting nightmare of boredom and dependency. Employers and social agencies are giving more thought to the problems involved. Dr. R. B. Robson presents an understanding of the psychological as well as the economic factors. (Page 24)

This is the age of color. It has transformed homes, and factories, too. If it did nothing more than giving an emotional lift to the people who live and work in these places it would be well worth the cost. But the benefits go far beyond that. There is increasing evidence to show that scientific color engineering is increasing output and reducing labor turnover and accidents. (Page 28)

Any person who has ever made a speech wonders how it went over. But it isn't mere vanity that makes our fictional safety engineer so introspective after his Congress talk. (Page 20)

(Bill Andrews, author of this series, was formerly editorial director for National Safety Council. He is now lay missionary for the Episcopal Church at Roundup, Mont., and is studying for ordination.)

began to carry the story of the Congress to nation-wide audiences. Newspapers carried several feature stories on various phases of safety.

"The safety movement must vastly extend its horizons," said President Dearborn. "The idea of cooperation must include many economic and social movements whose primary interest may not be safety, but which may properly claim kinship."

"The Council has long advocated three principles: (1) The Council should be a council of all

interested groups in the truest sense of the word; (2) Service should be its motto, and (3) Cooperation must be its guiding star."

Meeting in conjunction with the Congress was the Seventh Annual Federal Safety Congress sponsored by the Federal Safety Council for both civilian and military personnel of the government. In addition to their own meetings members of the armed forces participated in numerous other sessions of the Congress.

Those ten years prior to age 65 pass swiftly. Wisely used they can be a time for



Conditioning for Retirement

By R. B. ROBSON, M.D.

STATISTICS prove that over the past thirty years a kindly Providence has steadily increased the life span of the average human being in North America.

Those extra years should be a priceless boon. Since time immemorial man has sought the elixir of life, believing that the key to happiness lay in the ability to stretch one's time on earth.

But those of us whose professions bring us very close to people—the medical man, the psychia-

trist, the clergyman, the nurse and the social worker—know of scores of instances within our own experience in which longevity, far from being the key to happiness, has yielded nothing but disillusionment, worry and distress.

The number of such cases is multiplying rapidly. We see shaping up before us a vast human problem created by the fact that people are living longer. It is enlarged by the increasing shift of population from rural to urban areas. It is magnified by the mounting tendency in industry and business toward compulsory retirement of employees at age 65.

That section of the population made up of people 65 or older is

getting larger every year. The result is that increasing demands are being made upon industry, municipality, state and nation to deal effectively not only with the economic needs of these people, but their human needs as well.

I have had an absorbing interest in this problem for a number of years, both as a general practitioner and as part-time medical director in industry. Over a period of 30 years I have had an opportunity to observe at close range the health and work habits of employees of the Engine Division of General Motors Corporation in Windsor, Canada, with a work force of about 1,000.

My personal observations encouraged me to investigate a

DR. R. B. ROBSON is Medical Director, General Motors of Canada, Windsor, Ontario. This article was presented originally before the Industrial Nursing Section, Fortieth National Safety Congress.

method of preparing employees during their years of late maturity for the future periods of senescence and senility. I have tried to foster an independence of thinking and planning to mitigate the frustrations of the change-over period from active daily work life to a post daily work life.

The basic essentials for a pilot experiment was furnished by Dr. Steiglitz' excellent text on Geriatrics, and by a course of instruction on "Living in the Later Years" by the Institute for Human Adjustment at the University of Michigan. These sources divided the life span into these logical ages:

- 40 to 60 years—as late maturity.
- 60 to 70 years—as the period of senescence.
- 70 on—the age of senility.

Most efforts seemed to center on the attempted correction of an already existing condition in the period of senility.

Our interest centered in the age of late maturity 40 to 60 years as the most suitable area for the prevention of the ills of age and an opportunity for mental and physical conditioning.

We were pleased to accept a different classification from the

one previously mentioned, using rather

- 40 to 60 years—the age of prevention.
- 60 to 70 years—the age of control too late for prevention.
- 70 onward—the age of management, the defeat of invalidism.

Classes were held for older employees and their wives during the winter months of these past few years and problems of living after retirement were discussed. Speakers or discussion leaders were of university level, their presentations were just a bit over the heads of the class, which not only made them reach for the answer, but also complimented an intelligence present, though shyly restrained.

Of course, there was a social side to these meetings, for play and recreation are good tonics. They were a happy crowd!

This year several of the employees who attended these lectures have retired—a close follow-up is being maintained regarding their reactions to their new mode of living.

A factory superintendent, whose main preretirement obsession was to just "sit on the verandah and rock," is a night clerk in a semi-residential hotel. His easy facility of meeting and handling com-

plaints in his worklife is a distinct asset to his new vocation.

The big fellow with the large hands, who worked for twenty years in the cylinder block department, during the two years prior to his leaving work on pension at age 65, had used his week-ends in creating a neighborhood watch and clock repairing business in his home—now that he has retired he claims he is busier than he was at the plant.

Several men are still slowly wearing out their preconceived idea of doing nothing, to the distress of their wives—they are returning to my office at the factory for a chat, and one can faintly see a desire to bring up the subject of trying some project that had been simmering in their minds.

When a reunion of these retirees is held this autumn the worth of the "conditioning for retirement" program will be more evident.

We realize this is a new venture which will require change—overhaul—and perhaps other avenues of approach before a finished method may be set down.

At the moment the results are stimulating.

While it is not feasible to outline in any detail the substance of the fourteen lectures given to each class, a concept of the problem, the idea behind what we tried to accomplish may prove interesting.

The introductory lecture was realistic especially when the thought in most men's minds was "Give us plenty of pension, we'll take care of ourselves."

It was plainly spoken that there would be no discussion of purely financial matters. The economic position of the individual employee on retirement with stated leaving age and pension scheme plus social security, varied so with the racial background of each family—the frugality of the Scotch and German—the love of land of the Slavs and mid-European peasant group—the intense cohesion of the French Canadian family.

The Canadian of several genera-

—To page 130



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NSC — 1952-53

Elected at the 40th National Safety Congress

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Aids Milwaukee Civil Defense



On parade behind mobile canteen unit of American Red Cross is an emergency ambulance converted from a truck of Pabst Brewing Company. It is one of 22 such emergency ambulances donated to Civil Defense in Milwaukee. Also in the parade is one of the company's eight rescue trucks, each equipped with 85 different devices for emergency use.

THE CIVIL DEFENSE program in Milwaukee, Wis., has been given added impetus with the co-operation of the Pabst Brewing Company in donating its facilities as well as its trained personnel to the disaster program.

Pabst has prepared its fleet of 22 city delivery trucks to serve as emergency ambulances. Each truck will hold six stretchers with hardware fittings to keep them in position. At the first alert warning, drivers will report to their designated fire station, unload their beer and install the stretchers. In addition, eight rescue

trucks, completely equipped with every device necessary to aid in rescue work, and staffed by a crew of qualified craftsmen, are available on one hour's notice.

During the past year 420 Pabst employees in Milwaukee received a course on fire prevention and fire fighting. Some 350 Milwaukee employees have been given gas mask training and are prepared to save themselves and their fellow employees from the hazards of gases. In all, 125 employees have completed the 18-hour first aid training course and have received Red Cross certificates.

E. C. Woodward, safety director, A. O. Smith Corp., Milwaukee, Wis.

Dr. William P. Yant, director of research and development, Mine Safety Appliances Co., Pittsburgh, Pa.

Harold C. Zulauf, Hastings-on-Hudson, N. Y.

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Gwilym A. Price, president, Westinghouse Electric Corp., Pittsburgh, Pa.

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By HOWARD KETCHAM

**Twenty years ago color was used chiefly for eye appeal.
Now it's promoting safety, efficiency and morale**

PRIOR to 1935, little had been done to apply color-knowledge to every-day living. In the past 17 years, intensive research has made the influence, both of color and lighting, a major consideration in industrial planning and plant design. Equally valuable have been contributions to public and private transportation on the ground and in the air; and here, as in schools and in the home, a great deal remains to be done.

In industry, results of intelligent use of color and lighting have been immediate and positive. Worker morale has improved, and with it, efficiency. Elimination of "unintentional camouflage" in color, and of dimness or glare from faulty lighting has paid off

in reduced nervous tension and eye-strain and in lowered accident rates.

Although the psychological effect of color is part of our every-day experience, only recent scientific research has systemized our knowledge of the subject. We can now make full use of the complex impact which color has on us.

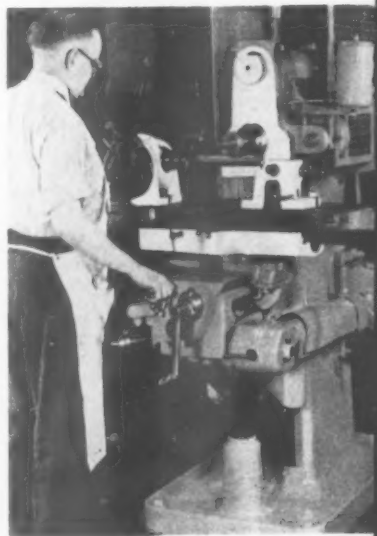
For most of us, yellow and red are gay and stimulating; black and gray have depressing associations. Some people find green vitalizing, like yellow or red. One manufacturer found green cafeteria walls relaxing to workers coming from white workrooms.

But the help color gives people in their work also makes them feel better. A radio-tube manufacturer encountered a color problem on his production line. An important operation involved highly precise spot-welding by women using machines having gas jets placed in a circular position. Exacting work placed great strain on the eyes. Work-benches, painted sky-blue (psychologically cool) counteracted heat from the welding. Machines themselves were painted light orange for contrast with dark jets. Dark blue or black directly under the machines height-

ened the visibility of bright metal machine-parts. Delighted management reported:

The results are astounding. In a New England milltown where most of the

Color emphasizes danger points at working areas and supplements mechanical guarding. This milling machine is painted in spotlight green and horizon gray. (Du Pont)



HOWARD KETCHAM, of Howard Ketcham, Inc., New York, was one of the pioneers in applying color to improve the use or appearance of manufactured products. He has developed color and design themes for more than 500 products, ranging from home appliances to streamlined trains. This article, presented originally before the 22nd Annual Convention of the Greater New York Safety Council, discusses the role of color in improving safety, efficiency and morale in industry and transportation.



Skillfully planned use of color improves seeing conditions. Light tints on walls and ceilings are supplemented by functional use of color on machines. (Du Pont)

employees are aware of nothing but drab, colorless mill interiors, the color alone was highly satisfying. The girls in all sections began to clamor for it. Foremen became so enthusiastic they did a lot of repainting themselves. Again, some employees bought denim dusters colored to match the machinery.

The plant became markedly cleaner, and, most important, shrinkage—that is, rejects, breakage, anything not passing inspection—showed an immediate and marked decrease . . . rejects on one item had decreased two-thirds within the first week . . . Every cent expended on paint-color has more than repaid that expense in dollars.

Not long ago, a color engineering project was completed at the Wire and Rope Division of Jones & Laughlin Steel Corporation. Working time lost through accidents dropped 38 per cent in the first six months after the job was finished. Improved employee morale reduced absenteeism from

about 5 per cent to less than 2 per cent. Labor turnover dropped from about 4.5 per cent to less than .45. Operator efficiency on complicated wire-twisting equipment climbed from 85 to 90 per cent between 1945, when the color-project was started, and 1948 when it was completed.

What we have seen previously also influences our reaction to color. To Long Island Railroad's old hands, accustomed to drab coach and locomotive colors, a change to field gray seemed astonishingly bright. But, for reasons to be discussed later, it was not nearly bright enough to provide desired high visibility.

Studies by the Better Vision Institute point up the toll on eyes taken by improper color and lighting. In the U.S., 23 per cent of the people have defective eyesight at the age of 15. By 50, the percentage has climbed to 75. By 60, 95 per cent of the eyes are defective. One of three workers in the U.S. needs glasses. Fifty per cent of office and textile workers, and 75 per cent of garment workers have faulty vision. These increases

are not due to advancing age alone. Such conditions point to the need for much more efficient use of color and lighting.

Because it can be rigidly standardized at all times of day, artificial lighting often promotes greater efficiency and safety than regular daylight. One example is the classification of cotton, where variations in light or incidental shadows tend to distort the classifier's judgment. In rooms with ceilings of natural celotex, walls of Munsell 8/ neutral, and floors of Munsell 7/ neutral, artificial daylight of 70 foot candles gives best results. Fluorescent lamps in the ratio three 40W daylight to two 20W blue, to four 25W tungsten filament lamps make most satisfactory artificial daylight, though lamps from different manufacturers vary in color. (As a check, correlated color temperature of the combination should be about 7500 units.) Lamp units should be 6 ft. above tables, at 8 ft. center intervals.

Visibility depends on good illumination, but good illumination

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Green is the predominant color for machine surfaces. It has proved restful to the eyes and housekeeping has improved.

Dashes of orange contrasting with green backgrounds highlight points of hazard in this Jones & Laughlin wire mill.



A Formula for Your Safety Contest

By C. L. RIENZO

THERE is a particular satisfaction that comes from being winner of a contest. There is even a carry-over of the stimulation of the competition on the part of the losers as they threaten the winner to look to his laurels for "next time the outcome will be different."

These facts hold true whether the contest is for a relatively minor prize; or whether the goal is as important as preventing suffering and loss of earnings by promoting safe practices and safety habits. That is the conclusion of Revere Copper and Brass Incorporated following several years' experience with interdivisional safety contests.

Revere recognized some time ago that the active support and enthusiasm of top management is essential to the success of any safety program. As evidence that this support existed, C. Donald Dallas, chief executive officer of the company, since retired, provided an impressive bronze plaque to be used as an annual award to the division of Revere which won the contest. The name of the division is inscribed on the base of the plaque as a permanent record, but the plaque itself travels to a new winner each year. Three winning years are required to retire the trophy.

But, establishing a basis for the contest which would provide equal opportunity for all divisions presented something of a problem. Revere is a multi-plant operation with 11 divisions stretching from coast to coast. Employment at these divisions varies from 100 to 2500 employees.

C. L. RIENZO is Supervisor, Workmen's Compensation, Revere Copper and Brass, Inc., Rome, N. Y.

In the beginning, the contest was based only on improvement of the frequency and severity rates over the previous year. This tended to penalize good safety performance because the better the record, the more difficult it is to improve it. To correct this inequity, the Industrial Relations Department developed a new formula which takes into consideration current performance as well as improvement over the previous year.

How It Works

Details of the formula are as follows:

Determination of a divisional score shall be based on the four following factors:

1. Frequency Rate (Two decimals—disregard third).
2. Severity Rate (Two decimals—disregard third).
3. Increase or Decrease in Frequency Rate as compared to previous year.
4. Increase or Decrease in Severity Rate as compared to previous year.

Computation of scores shall be made through the medium of the following formulas and reflected in "Points Earned."

1. Frequency rate points earned = 100 Points—(current Frequency rate \times 5 points) (Do not use minus points).

2. Severity rate points earned = 100 Points—(current severity rate \times 25 points) (Do not use minus points).

3. Determine difference between current frequency rate and previous year's frequency rate. Arrive at the "percentage change" by dividing the difference by the *largest figure* (be it current or previous year rate) and disregard any decimals in the resulting % figure. This percentage will be either a plus % or minus % (dependent on whether current year is or is not an improvement over previous). In either event points are earned.

- (a) Points earned for a plus % = 50 points + (Plus % \times .50 points).

- (b) Points earned for a minus % = 50 points — (Minus % \times .50 points).

4. Compute severity rate "% change" points earned in the same manner as (3) above.

5. The total points earned for all four factors determine the final divisional score.

6. Divisional standings shall be reflected by the most points earned.

Revere's annual safety contest has become a more satisfying trial since the installation of the new formula. Even the last winner, supporting the best record in the corporation, has a chance to win on the basis of its current record and the further improvement it can make. The formula is sufficiently flexible to make it applicable to interdepartmental competition in a single plant operation.

It wouldn't be realistic to claim that this new formula is wholly responsible for it, but in 1951, Revere's 150th anniversary year, the lowest frequency rate in the company's history was established.

EXAMPLE

| | Frequency Rate | Severity Rate |
|---|----------------|---------------|
| Current year | 7.13 | 2.42 |
| Previous year | 10.26 | .81 |
| % Change | Plus 30% | Minus 66% |
| 1. 100 points — (7.13 \times 5 points) | = 64.35 points | |
| 2. 100 points — (2.42 \times 25 points) | = 39.50 points | |
| 3. 50 points + (30% \times .50 points) | = 65.00 points | |
| 4. 50 points — (66% \times .50 points) | = 17.00 points | |
| Divisional Score | 185.85 points | |



Milwaukee Celebrates Safety Anniversary

IN THE banquet room of Milwaukee's Hotel Pfister, where the banquet which launched the First Cooperative Safety Congress was held on September 30, 1912, some 225 members and guests of the Association of Commerce met at luncheon on September 29 to honor the safety movement and its founders.

William H. Cameron, of Evanston, Ill., one of the founders of organized safety work and the first managing director of the National Safety Council, received a citation from the Association of Commerce in recognition of a lifetime of service to the safety movement. The presentation was made by Myron E. Jolidon, Chairman of the Association's Safety School. In presenting the certificate, Mr. Jolidon emphasized the tangible savings of organized accident prevention work to Milwaukee industries. Accident prevention work in the area had undoubtedly prevented 5,000 serious injuries to workers in local industries and saved 73 of them from accidental death.

Ned H. Dearborn, president of

the National Safety Council, extended his greetings to Milwaukee as the birthplace of the safety movement and reminded the audience of the vast amount of work yet to be done in making America safe.

An important contribution to Milwaukee's salute to safety was a 24-page tabloid supplement of *The Milwaukee Sentinel*, telling the story of the 40-year fight against accidents waged by Mil-

waukee and Wisconsin. Many local industries and commercial concerns carried advertisements in the supplement telling of their own accomplishments in accident prevention and extending their greetings to the safety movement.

William H. Cameron, one of the founders of the National Safety Council and its first managing director, receives a citation from the Milwaukee Association of Commerce in recognition of 40 years of service to the safety movement. Myron E. Jolidon (left) presents the certificate. (Milwaukee Sentinel photo)



Chemical Laboratories

Published by National Safety Council

425 North Michigan Avenue, Chicago 11

III. REAGENTS

87. The supply of all reagents kept in the laboratory workroom should be as small as possible. All reagents not actually being used should be returned to the storeroom.

88. All containers should be clearly labelled. The materials they contain should be completely identified. Original labels showing batch analysis should be preserved on the container. This can be done best by coating them

This is the second and final installment of this Safe Practices Pamphlet. Part I appeared in the October issue of National Safety News.



Figure 9. A metal desiccator guard to confine glass chips in case of an implosion. (Courtesy Fisher Scientific Co.)

This pamphlet is based on the experience of a number of companies. It should not be assumed that every acceptable safety procedure has been included and the pamphlet should not be confused with federal, state or insurance requirements, nor with National Safety Codes.

with a plastic or paraffin, or with transparent tape.

89. Unless chemicals found in unlabelled bottles can be identified easily and positively, they should be disposed of by someone who understands and will act according to the risks involved.

90. New chemicals which appear regularly on the market frequently have properties that are neither generally nor completely known. Before they are released for general use, all of the available information on them should be obtained from the supplier and distributed to the laboratory personnel. Guarded small-scale tests should be made on all unknown reagents to determine their hazard potential.

91. Smelling chemicals should be done cautiously. The bottle should never be held directly under the nose but rather held away, and vapors from it brushed to the nose with a gentle hand motion. Only the top of the lung

should be used in smelling chemicals. The lungs should always be filled with enough clean air so that the fumes can be completely expelled from the nose and upper respiratory tract.

92. Pipets should never be filled by mouth. (See Fig. 10.) The tube should be filled by immersion or by a suction filler of the type illustrated. When a pipet is to be filled or a syphon started with suction applied from an aspirator, a pump or vacuum line, a scrubber trap should always be placed in the suction line.

93. Small reagent bottles should be transported in carrying racks or trays. Larger containers should be moved in protecting, carrying jackets. Even though the poly-



Figure 10. A pipet filler.



Figure 11. Laboratory solvent container rack. Note that both cans and drip pans are bonded together and grounded. (Courtesy General Electric Research Laboratory.)

ethylene containers are used and the breakage hazard reduced, carrying racks are still necessary for stable loads and carrying ease.

Storage Facilities

94. Laboratory storage rooms for reagents should be isolated from the rest of the laboratory installation by fire-walls and ceilings. They should have permanently installed automatic Class B fire extinguishers or sprinklers, should be well ventilated, and cannot be too spacious. It may



Figure 13. This man is wearing the minimum protective clothing for his job, transferring acid from a carboy to a jug.

be necessary to equip the reagent storage room with an exhaust hood under which particularly dangerous materials may be stored.

95. Lighting fixtures should be explosion proof and where possible reagents should be stored out of direct natural light. Shelves should be low and not crowded. Reagents likely to react together should be stored apart. (See Table 1.)

96. Strong oxidizing agents: nitrates and nitric acid, permanganates, peroxides, perchlorates and chlorates, and perchloric acid must be stored and handled so



Figure 14. Simple pouring racks like this may be used when liquid is transferred from a large vessel to a small one. (Courtesy General Scientific Co.)



Figure 12. A mercury vapor detector used to monitor laboratory work areas. (Courtesy General Electric Co.)

that mixtures with easily oxidizable materials: sulfur, sulfides, glycerine, etc., is impossible. If pressure-sensitive materials like perchlorates must be kept in the laboratory workrooms, small quantities only should be stored, and then in wide-mouthed bottles fitted with loose, soft rubber stoppers. Large quantities of perchloric acid should be kept in isolated storage outside the laboratory buildings. Ammonia should be stored away from the halogens.

97. Volatile liquids should be stored so that there can be no build-up of internal pressure likely to rupture the containing

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Figure 15. Compressed gas storage cabinet. Note that the cylinders are chained in an upright position and the shipping caps are kept on.

Powered Hand Trucks

Published by National Safety Council
425 North Michigan Avenue, Chicago

1. A powered hand truck is defined by the ASA power truck code ¹ as "A (power) truck which is designed to be controlled by a walking operator." (Figure 1)

2. This data sheet deals mainly with the hazards peculiar to powered hand trucks. However, practically all the rules and principles for safe operation and maintenance of power trucks apply to powered hand trucks, too. Full consideration should be given to general truck safety principles

This Data Sheet is one of a series published by National Safety Council. It is a compilation of experience from many sources. It should not be assumed that it includes every acceptable procedure in its field. It must not be confused with American Standard Safety codes, federal laws; insurance requirements; state laws, rules and regulations, and municipal ordinances. Reprints of Data Sheets are available from the National Safety Council.

which are fully dealt with in other National Safety Council publications ^{2, 3}, and in the ASA code.

3. Powered hand trucks may operate either by electric or gasoline power. For data on safety factors related to the type of power, see the publications referred to above.

Hazards

4. The principal hazards in the operation of powered hand trucks are collisions involving fixed objects, other trucks, the operator or other people; and upsetting the load.

5. Elimination of accidents is largely a matter of care in operator selection and training, plus rigid enforcement of operation and

plant traffic safety rules. Operators should be licensed only after adequate training and examination. *Only authorized employees should be permitted to operate trucks.*

Selection and Training of Operators

6. The operators of powered hand trucks should be mentally alert and in good physical condition.



Figure 1. One design of powered hand truck.



Figure 2. Wheel guards should be added if design of truck does not protect operator from injury by wheels. Note load capacity marking. (Courtesy Allis-Chalmers Manufacturing Co.)



Figure 3. Hand trucks should have keyed ignition locks to prevent use by unauthorized persons. (Courtesy Allis-Chalmers Manufacturing Co.)

7. Operators should be given a definite and adequate course of training before being licensed to operate a truck. They should be impressed with the responsibility of the job and the possible serious consequences of failure to observe safe operating practices. Licensed operators should be given an examination at least once a year to test their familiarity with safe operating procedures.

8. Training should include intensive drilling in the correct operation of all controls. (Oper-



Figure 5. Chain sprockets of high lift trucks should be completely guarded. This photograph also shows warning horn. (Courtesy Allis-Chalmers Manufacturing Co.)



Figure 4. A) left, platform roller of a high lift truck is shown unguarded. (Courtesy Allis-Chalmers Manufacturing Co.)

ating instructions are given in the truck manufacturer's manual.)

9. Employees should be taught the safe way to start and stop a truck. Procedure varies according to the make of the truck. In general, however, the point to be emphasized is starting and stopping *gradually*. Sudden starts or stops may result in the operator's losing control or in the load's being dislodged.

10. Operators should be instructed in inspection procedure, but they should understand that repair and maintenance are the function of the maintenance department rather than of the operator. (See paragraphs 28 and 29.)

11. During the course of training, operators should be instructed in the following safe practices:

(a) Do not operate the truck with wet or greasy hands.

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Figure 6. This type of prism guard is installed by some companies to prevent operator riding on truck. Warning horn can be attached to guard. (Courtesy Allis-Chalmers Manufacturing Co.)



Congress Paper

(Fiction)

By BILL ANDREWS

AUTHOR'S NOTE: It is just five years ago, in November, 1947, that the fictional "I" of these stories made his first appearance on these pages. In that installment he accepted the job of safety director of Jackson-Barnes, Inc.—accepted reluctantly an offer made churlishly by old Claude Jackson.

It is a comment on the duration of the series that a minor character in that first installment, the plant's head nurse, is now the mother of the safety man's two children.

We killed the Diary off just once during the five-year period. The December, 1948, installment ended on a lived-happily-ever-after note, following the safety man's most improbable honeymoon at the Na-

tional Safety Congress. Enough of you people bellowed at the omission of the feature to make us reopen it in April, 1949. So, unbelievable though it seems to me, the installment below is No. 58.

The safety man and I are deeply indebted to all of you for being a wonderful audience. Your letters and spoken words of encouragement and advice have kept the series going and have enriched its content. But even more important, all of you good safety men whom I have known personally have served, in some measure, as the models for the character. He is no one of you—but I hope he is something of all of you.

I have never given him a name,

precisely because, to me, he is, within the limits of the safety engineering profession, Everyman—as true a picture of the conscientious, aspiring, imperfect Everyman as my heart and mind and typewriter could draw for you.

I'll keep on letting him tell you his story as long as many of you want to hear it.

* * *

October 23, 1952

I guess it was a good enough paper. Several people said so, afterward, and some of them didn't seem to be just patting me on the back. Certainly it was a sounder, better paper than any of the five others that I have delivered to National Safety Congresses in the past.

And yet, as I stood at the microphone in that room in the Hilton this afternoon, with my magnified words bouncing off the gilt-edged mirrors on the walls, what I was saying seemed like a slick and almost phony rendition of a human situation that, for me at least, had been tough, alive, and sometimes dramatic. In some ill-defined way, it seemed to me that I was almost doing an injustice to a group of swell guys in our machine shop. And, what is more important, it seemed to me that I had to leave so much out of the paper that its usefulness to my listeners must be very small indeed.

I was talking about an interesting though inconclusive experiment we made to test the relationship between the promotion of off-the-job accident prevention and the on-the-job rate. For 18 months we poured off-the-job material into the machine shop hot and heavy, NSC leaflets, posters, talks, outdoor films, traffic dope. We continued a normal amount of on-the-job safety work and propaganda. In the woodshop, we kept the on-the-job effort at normal, and did not mention off-the-job accidents.

If the factors were better controlled, and if we had more cases over a longer period, the results would be tremendously impressive, because we did show a 28 per cent drop in off-the-job accidents caus-

ing absenteeism in the machine shop as against a 6 per cent decrease in the wood shop. At the same time, the machine shop had a 9 per cent reduction in disabling accidents on the job as against a 2 per cent increase in the wood shop.

But how could I make these people in the hotel ballroom see behind the rococo decorations, behind my flat words and the statistical charts on the easel, to a machine shop with the cutting oil smoking, into the hearts of old-timers and kids, how could I let them listen to the lunch-hour bull sessions and to the wise cracks about vacation safety that became a commonplace in the shop—wise cracks which often had a ribald, bawdy quality?

Most of all, how could I explain, so that these strangers would understand, this shop's deep awareness of off-the-job accidents, born of the death four years ago in a holiday auto crash of Joe Blaine, the best machine shop foreman I ever knew?

And how could I make them see Riley, the sweet-tempered, soft spoken woodshop foreman, the patient, almost motherly protector of all green hands, the guy with the finest touch in training new workers to skill and safety consciousness that I ever saw? But the same Riley qualities that make him fine with beginners, make him less effective with experienced men, more diffident about correcting their mistakes, more inclined to let them work in their own way.

Luke, on the other hand, who had never quite been able to escape from the shadow of Joe Blaine's personality, is a tougher, sourer, stronger figure than Riley in his capacity as machine shop foreman. He's less loved, but more efficient.

Would my experiment have worked, I wonder, if I had reversed the departments—putting the burden of carrying the torch for vacation safety on Riley, whom his hands sometimes call "Uncle Pat," who always knows which of his men are having family trouble or illness at home?

Why the Poor Supervisor?

EVERYBODY SAYS, "The supervisor is the key man in safety."

Mr. Big looks over rising insurance premiums and accident rates and says, "We have to do something about the supervisors. They are not doing their job on accident prevention."

But, the other day, Joe saw one of his men buffing a piece without his goggles on. This was the third time that Joe was forced to tell this employee to wear goggles on this job. When the worker gave him an argument, Joe told him to pick up his pay.

When Mr. Big heard about Joe firing this man, for not wearing his goggles, Joe was raked all over the coals—told that good buffers were hard to get, not wearing goggles didn't warrant firing a man and production had to be thought of first.

In an adjoining plant, Sam saw one of his men operating a small punch press with the guard disconnected. When given an argument, for the second or third time, about the requirements for a guard on each press operation, Sam told the man to pick up his pay. The man went to his union steward and after several conferences with Mr. Big, Sam was dragged onto the carpet and the employee was soon back on the press. "It was just a short run anyway."

After these experiences, Joe and Sam discreetly look the other way from unsafe acts.

Mr. Big looks over his rising insurance premiums and accident rates and says, "We have to do something about the supervisors. They are not doing their job on accident prevention."

ROBERT D. GIDEL, *Senior Engineer*
Industrial Department, National Safety Council

I'm not sure. It seems to me that there was extra impact in off-the-job safety materials coming from a rough-talking, production-minded guy like Luke, whom no one could accuse of being overly paternalistic.

I wonder if it would ever happen again in another shop that a talk about the dangers of careless handling of fishing tackle would suggest to an apprentice machinist the dangers of handling a light hoist? Or that a movie on traffic safety would get a bunch of guys to complain about the driving of some power truck operators?

Those things did happen in our machine shop, and a lot of other things happened in which the con-

nection with the off-the-job campaign was less obvious, but still present.

Maybe I'm being overly conscious of the omissions in that speech of mine. Maybe I can assume that the members of my section who heard it would understand the presence of special factors, would translate my methods and thinking in terms of the local shop situations which they know.

If they'll do that, then it was a speech worth giving.

But if they think I was handing them a magic formula which they could mechanically apply in their own plants with certain success, then the speech I gave was phony, dangerous, and stupid.

Safeguarding human assets through an

Occupational Vision Program

By RICHARD FEINBERG, Ph.D., D.O.S.

BY 1953, forty years will have passed since the National Safety Council has come into existence. Its propitious advent in 1913 for purposes of collecting and distributing information regarding safety in industry, the home, travel and schools was the logical outgrowth of a safety movement in the rise of centralization and mechanization of industry and the growth of cities.

While the specter of huge costs in workmen's compensation for injuries, deaths, damage payments and litigation prodded management, humanitarianism and social consciousness impelled it also along the road of a safety program. Whatever the motives, and there were several, "all roads lead to Rome," and thus, in 1952, we have the knowledge that the Ohio Safety Conference is one of dozens similar held annually across the nation. Their purpose, if I may borrow the phrase from the Honorable Lee E. Skeel, in your program booklet, is to spur safety personnel to "aggressive accident prevention."

In analysis of that phrase, we could say that "aggressive accident prevention" applies literally only to the physical and structural human being. But what about injuries to his mental and emotional self? What about the disturbances to his normal behavior patterns as a result of excessive noise, vibration, undue temperature, poor ventilation, odors,

and, very significantly, improper lighting? Those affect, often with disastrous results, the *psychological* self.

Perhaps, then, we should broaden the base of "accident prevention" and the safety engineer should be attuned to these problems. Left alone and unresolved, they become a drain of human resources and ultimately a threat to the employee's very existence. "Loss prevention" is a term used by insurance people and, I believe, is an excellent vehicle to convey all of these factors.

No one field has been broader in relating the working human to his task and environment than that of occupational vision. Concerned with the interaction of man, his job and his surroundings, it is a

great deal bigger in its scope and implications than simply a program of providing protective goggles. The necessity, realized in the earlier days, for a "goggle program" initiated our modern vision programs of visual skill analysis, placement in accordance with visual abilities, correction of the visually deficient, and enhancement of the visual skills of selected employees.

The evolution from a vision program whose sole purpose was to "save eyes" to one where we save humans has been a long road but traversed in the short time of twenty-five years in man's history.

When we speak of safeguarding human assets through a vision program, what precisely do we mean? Dr. Sappington aptly



Dr. RICHARD FEINBERG is President, Northern Illinois College of Optometry, Chicago. This article is from an address at the Ohio State Safety Conference, Cleveland, September 17, 1952.

stated, "The human body has no spare parts."¹ Translated more fully, we may say that "the total individual, including his physical, physiological and psychological components, has no spare parts."

Nothing of the body's abilities and capabilities can be sacrificed without loss of equilibrium. The various components of the total individual must be conserved. Yet, we extravagantly have wasted efficiency, comfort, accuracy, posture, stamina and health by permitting employees to work at subnormal levels of efficiency through ignoring their visual needs and their visual environment. Dr. Snell has defined "good vision" as "that degree of visual functional ability which is adequate to perform the visual task presented."²

I should like to add these amendments, "... providing that the task is geared to the employee's performance and that the environment is geared to the employee's performance." In other words, the new employee must be visually qualified and the task must be visually organized. This means consideration of the materials which must be seen clearly, contrast and brightness of the work materials and the surroundings, and the time necessary to accomplish the seeing task. It means consideration of the job and the vision of the employees who performs it.

Our visual programs in industry slowly but surely are moving in the direction of visual efficiency and visual functions. The protection phase will be with us always in certain industries and on some jobs. Nevertheless, even here, visual performance has come into its own as a serious means of removing accidents as a result of, "I didn't see clearly!"

(1). Sappington, Clarence Olds, *Essentials of Industrial Health*. Lippincott, 1943.

(2). Snell, Albert C., *The Need for a More Realistic Ophthalmic Service in Industry*. New York State Journal of Medicine, Vol. 42, No. 15, Aug. 1, 1942, p. 1435.

A Safety Record's 10th Birthday



Celebrating completion of 10 years without disabling injuries employees of the Mold Loft Department at Dravo Corporation's Pittsburgh shipyard get set to cut a congratulatory cake. Lofting is one of the oldest occupations in the shipbuilding industry, and it can be one of the safest, as this record of Dravo loftsmen demonstrates. In the Mold Loft of a shipyard, blueprint drawings are translated into full-scale cardboard and wood patterns and mock-ups of marine vessels, with the familiar hazards of woodworking operations.

The issue is not whether visual care in the U. S. is better than in other countries but whether it is as good as it ought to be in a country of such rich resources of personnel and facilities.

Before we can properly evaluate a vision program then, we should have some philosophy as to what the vision program is to accomplish.

A realistic approach may say, "Management wants solely an eye protection program. Nothing else need apply." Operationally, however, the protection program becomes one in which new applicants are tested visually so that they may be placed safely; present employees are tested and provided with corrected protective glasses; proper medical care is available in case of injury; machine guards are installed wherever necessary; and light is provided quantitatively and qualitatively as required.

This supersedes somewhat the technique of a vision program in which a foreman kept a half-dozen pair of plano glasses in his desk and which he supplied to employees on demand.

A modern vision program which will safeguard human assets may be outlined as:

1. Testing employees' visual skills.
2. Proper analysis of specific job visual demands.
3. Establishment of correlations between visual skills and job demands.
4. Placement of applicants into jobs for which they are qualified visually as well as physically.
5. Testing employees already on the job using standards established in item 3 above.
6. Periodic rechecks of special employee groups:
 - (a) Presbyopes
 - (b) Employees in jobs having special visual demands (e.g., very close work)
 - (c) Those already identified as being visually handicapped.

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Green Cross News . . .

Activities of Local Safety Councils and Chapters

Compiled by TOM A. BURKE

Director of Local Safety Programs, Field Organization, NSC

Cleveland Series

THE FALL-WINTER SERIES of Industrial Safety meetings, sponsored by the Industrial Section of the Cleveland Safety Council, was launched on Wednesday evening, Sept. 17, with a safety rally, attended by approximately 600 persons. Charles F. Alexander, director, Industrial Department, NSC was the speaker. A program of music and entertainment followed.

An interesting and dramatic feature was the presentation of three "Nick O'Time" awards by the Ohio State Safety Council, for heroic emergency action that saved human life. The industrial series will continue through the winter, with one session each month, the closing meeting to be held in May, 1953. Ellwood H. Fisher, chairman of the board, Fisher Bros. Co., Cleveland, and Mathew W. Braidech of the National Bureau of Fire Underwriters, were the speakers at the second meeting on Oct. 13. Each session features a leading industrialist and a technical industrial safety engineer.

Richmond Report

The annual report of President V. B. Fitzpatrick of the Richmond, Va., Safety Council for the fiscal year 1951, reveals statistical proof of important accident prevention accomplishment in the area during the past 20 years. With the exception of the year 1950, the total number of accidental deaths from all causes was less in 1951 than in any previous year. In 1950 there were 76 accidental fatalities and last year, 78. All other yearly totals clear back to 1932 were higher. The statistical trend for the two decades indicates that 177 lives

have been saved, with a monetary saving of more than six million dollars. The 32-page report includes recitals of promotional and educational accomplishment in the Council's ten divisions.

Julien Harvey Honored

JULIEN H. HARVEY, first executive vice-president of the Greater New York Safety Council and an official until his retirement a year ago, was honored by that organization recently. A resolution of appreciation inscribed on a scroll, was presented to Mr. Harvey, as an expression of the Board's "deep sense of obligation and sincere gratitude—for his long and valuable services to the Greater New York Safety Council over the years."

Pawtucket Manager

The Blackstone Valley Safety Council, Pawtucket, R. I., announces the appointment of John J. Booth as the new secretary of the organization. Booth comes from Central Falls, R. I., where he served as captain of the city's fire department for 25 years. Booth succeeds Wesley Bundesen, who resigned recently to accept a position in industry.

"Safety Fair"

St. Joseph and Benton Harbor, through the Twin Cities Area Safety Council, are planning a "Safety Fair." It will consist of safety exhibits and general discussions along industrial safety lines. The project is scheduled for Friday and Saturday, October 31 and Nov. 1 and will include a Fire Power Safety Show, an industrial fair, an electrical demonstration

and special sessions on dust, noise and industrial electrical hazards.

"Nick O'Time Awards"

The "Nick O'Time" award was established on September 1, 1952 by the Ohio State Safety Council and the Bulova Watch Co. It is given to persons who have saved a life by an emergency "nick o'time" heroic act—or by the proper application of emergency first aid or resuscitation techniques. Five persons—three men, a girl of 20, a boy of 12—have already received the award, a total of eight lives being saved—seven from drowning. A sixth award was presented on October 7 at Sandusky, Ohio. The award consists of a certificate describing the action that earned the award and a Bulova watch engraved "Nick O'Time" with the date of rescue and the name of the winner.

Industrial Safety Show

A "bigger and better" Industrial Safety Show is planned by the Worcester County Safety Council for November 5-6. The two-day event will feature 50 individual safety exhibits, a banquet on the 5th, a "Smile Party" on the 6th, and best of all, an excellent program of industrial safety talks by qualified speakers. "Protection for the Workers" is this year's theme.

Pittsburgh's Industrial Course

Pittsburgh's annual Safety Training Course for foremen and supervisors, sponsored by the Western Pennsylvania Safety Council's Industrial Section, was held on September 30, October 7

—To page 140

GREATEST ADVANCE IN

eye safety

SINCE THE INVENTION OF GOGGLES

K-LENS-M

**Brings Clear Safe Vision
to Your Workers**

Here's the modern way to promote the wearing of Safety Goggles. Install K-LENS-M Lens Cleaning Cabinets with K-LENS-M Anti-Fogging Stations, endorsed by Safety Engineers, to provide clean, clear safety goggles for your workers. K-LENS-M Lens Cleaner and K-LENS-M Anti-Fogging Liquid are used by leading manufacturing plants, packing houses, canneries, public utilities, government installations and business offices.

Easy-to-use, safe, **EFFECTIVE ON GLASS OR PLASTIC.**

Long-lasting K-LENS-M Liquid and Tissues are dispensed by a compact metal dispenser cabinet containing large bottles of K-LENS-M Lens Cleaner and K-LENS-M Anti-Fogging Liquid as well as lint-free tissue. Equipped with spray pumps and disposal space for used tissue. Easy to install, use and service.

Also available for off-premise use in individual pocket-size plastic "Twinkit," containing a bottle of K-LENS-M Lens Cleaner and a bottle of K-LENS-M Anti-Fogging Liquid.

K-LENS-M Complete Lens Cleaning and Anti-Fogging Equipment

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INCORPORATED
CORTLAND 1, N. Y.

Manufacturers of

K-LENS-M

Liquid Lens Cleaner
Lint-Free Lens Tissues
Anti-Fogging Liquid
Dispenser Cabinets
Anti-Fogging Station

Small Businesses and Associations

By A. M. BALTZER

Director, Small Business and
Associations Program, NSC

Centennial of Engineering Includes Small Business

THE WEEK OF SEPTEMBER 7-13 was a big one in Chicago, for the engineers really took over. From our office windows we could see the banners "Welcome Engineers" stretched across Michigan Avenue above the Chicago River Bridge but we hardly needed this reminder to know that there were big doings at the various hotels and at the Museum of Science and Industry. The newspapers were full of human interest stories and background data on engineering progress.

There may have been other sessions featuring small business but we do know that the ASME included the writer on their machine design session. The lively discussion that followed the morning meeting indicated a genuine interest on the part of mechanical engineers. These fellows are in an excellent position to help small companies and we're trying to reach more such groups.

On September 9 Chairman Reinhard, Vice Chairman Le Gore and the writer worked out a triple play chart talk before the Third National Standardization Conference of the ASA. This short, snappy visual presentation resulted in some very nice publicity.

Reprint on Small Business Proves Popular

The reprint of the talk given before the President's Conference on Industrial Safety by Ned H. Dearborn, President of the National Safety Council, has been in great demand. All types of organizations have seen in this talk the means of stimulating management

in small companies toward more interest in accident prevention.

With the cooperation of Smaller Business of America, Inc., the Greater Cleveland Safety Council is distributing almost 1,000 copies of the reprint; the Pennsylvania Manufacturers Association is distributing copies to its members and associations in the state; the Furniture Manufacturers Association is using the reprint as one of its mailing pieces in launching an industry-wide safety program; W. H. Adams, chairman of the Public Utilities Section, sent copies of the reprint to all members of this Section with the suggestion that they pass the reprint along to small utility companies and direct inquiries to the Council.

Complimentary copies are still available from the Industrial Department, National Safety Council.

Safety Savings

A featured item in our Associations News Letter is *Safety Savings* which, in every issue, passes safety ammunition to Association executives and other readers. The Fall issue of the *Associations News Letter* (complimentary copies on request) contains the following examples:

American Association of Oilwell Drilling Contractors:

In California rig insurance rates cut from \$2.50 in 1940 to \$1.25 in 1952—a 50 per cent reduction.

In Texas, compensation rates reduced 36 per cent between 1938 and 1950.

In Illinois, compensation rates dropped 60 per cent.

One contractor saved almost \$26,000 in one year on a \$300,000 payroll.

Portland Cement Association:

Occupational injuries reduced 87 per cent in 36 years; 50 per cent in past 7 years to an all-time low of \$4.22 disabling injuries per million man-hours.

The increased use of safety shoes cut lost time toe injuries by 60 per cent.

Folding Paper Box Association:

A 20 per cent reduction in accident rates during the first year of their safety program.

One company reports saving \$5,600 and a 74 per cent reduction in lost time accidents in the first four months of the program in 1952.

Another company reports a 30 per cent reduction in insurance rates.

Committee Expands

H. F. REINHARD, chairman of the Council's Small Business and Associations Committee, has expressed his appreciation of his Committee's active cooperation and invited all present members to continue. The organization of the Committee remains the same; an "Executive Committee" which is in a position to meet frequently and work closely with Mr. Reinhard and the staff, and a group of "members-at-large" representing local association groups.

Two new members will bring the Committee even more diversified viewpoints:

Mr. S. R. Christopherson, President Smaller Business of America, Inc. Cleveland, Ohio

Mr. Gordon P. St. Clair, President Medical Supply Company Rockford, Illinois

Mr. Christopherson's organization has over 900 small company members, principally in the Cleveland area and is now setting up safety activities for members.

Mr. St. Clair not only heads a nationally known first aid supply company but has guided it to an outstanding safety record. Through his efforts the Rockford Chamber of Commerce and the Rockford Safety Engineers' Club are co-sponsoring a safety consultation service for small companies.

Section Helps Small Business

The Meatpacking, Tanning and Leather Products Section of the Council is making a drive to help small meatpackers and tanners. General Chairman Pochop of the John Morell Company sent a personal letter of invitation to 50 small companies giving them details on the Congress and suggesting that they send representatives.

No. 4 of a series of 6

ANSUL

DRY CHEMICAL
FIRE EXTINGUISHING
EQUIPMENT



MODEL 30-B



Send for File No. 347. You will receive a variety of helpful printed matter. Included is our latest catalog which describes Ansul Extinguishers of all sizes — from the small Ansul Model 4 to Ansul Piped Systems and Ansul 2000 lb. Stationary Units. Also included is additional information on Ansul Services.

.. INSPECTION OF EQUIPMENT

Factory trained representatives will periodically inspect all Ansul Fire Extinguishing Equipment in the plants of customers desiring this service. There is no charge or obligation in connection with this Ansul service. Upon completion of each inspection, the Ansul representative prepares a written report on the equipment's condition to be retained by the customer.

Frequently Ansul men also conduct refresher courses in fire-fighting techniques for our customers' employees.

For more information concerning Ansul services, contact your nearest Ansul representative.



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ANSUL
Chemical Company

FIRE EQUIPMENT DIVISION • MARINETTE, WISCONSIN

OFFICES AND DISTRIBUTORS IN PRINCIPAL CITIES IN THE U. S. A., CANADA AND OTHER COUNTRIES
ALSO MANUFACTURERS OF INDUSTRIAL CHEMICALS, REFRIGERANTS AND REFRIGERATION PRODUCTS

*He scoffed at
safety breathing
equipment...*



... but he finished the job wearing a

Scott Air-Pak

(TRADE MARK)



"Scott Air-Pak GIVES ME PLENTY OF AIR. KEEPS ME FEELING COOL INSIDE HOT TANKS!"

An Eastern dye plant needed a painting job done on the inside of a large tank. Although the paint was of a particularly obnoxious compound, the man hired for the job scoffed at the offer of safety breathing equipment. He entered the tank, only to stay inside for six minutes. Making a second attempt to paint the interior without protection, he lasted only one-half minute. The third time he put on a SCOTT AIR-PAK with a hose attached to an air cylinder and stayed in the tank for three hours, completing the entire job. Questioned as to SCOTT AIR-PAK's operation, he said "I never knew that working inside of a hot tank could be so cool and comfortable — and safe. I'm taking no more chances!"

Hundreds of other industrial plants throughout the country have discovered that using SCOTT AIR-PAKS is the safest, most efficient way to complete work in hazardous atmospheres quickly, easily, economically.

Call in your Safety Equipment Dealer or
WRITE TODAY
for full information.



FOR SAFETY—FOR SERVICE

SAFETY EQUIPMENT DIVISION

SCOTT AVIATION CORP.

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CANADA: SAFETY SUPPLY CO., TORONTO — BRANCHES IN ALL PRINCIPAL CITIES
— EXPORT: SOUTHERN OXYGEN CO., 157 Chambers Street, New York 7, N. Y.

72-Year-Old Worker Rescues Infant

FOR SAVING 11-month-old Terry Rohrer from drowning, 72-year-old Frank Heyard of Canton, Ohio, was presented the President's Medal by the National Safety Council.

Heyard, an employee at Republic Steel Corporation's Massillon, Ohio, steel plant, received the medal at a brief ceremony at the plant. In attendance were 200 of Heyard's fellow-employees, parents of the child and officials from the city of Canton, the American Red Cross, National Safety Council and Republic Steel.



Terry fell face down into a wading pool while playing in the back yard of his home. Hearing the cries of the child's distraught mother, Heyard ran from his yard and promptly applied artificial respiration. By the time Canton police and firemen arrived a few minutes later, Heyard had revived Terry.

Heyard used the back pressure method of artificial resuscitation, which is being taught by many organizations. Heyard, a senior melter at Republic's Massillon open hearth department, learned the method in first aid classes at Republic Steel.

The medal was presented by R. H. Ferguson, a director of the National Safety Council and assistant superintendent of industrial relations for Republic.

An interested spectator at the ceremony was Terry, who proved that he was suffering from no ill effects from his mishap.

REDUCE ACCIDENTS WITH...

GRO-CORD

a great family name!

NEO-CORD

The Neo-Cord sole has a high non-slip quality. Widely used among safety men because of the cord and du Pont Neoprene construction. Resistant to gasoline, acids, caustics and heat — very resistant to metal chips.



NEO-CORK

The Neo-Cork non-marking sole is one of the most popular soles incorporating du Pont Neoprene. Surprisingly non-slip characteristics under a great variety of working conditions.



NEO-COMP

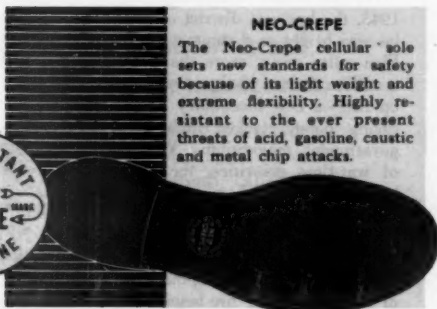
A good sole of du Pont Neoprene for general working conditions. It is strong, sturdy and provides a large measure of protection against acids, gasoline and similar threats.



We are the largest users of du Pont Neoprene in the sole and heel industry and make the only complete family of neoprene bottom stock for every industrial use.

NEO-CREPE

The Neo-Crepe cellular sole sets new standards for safety because of its light weight and extreme flexibility. Highly resistant to the ever present threats of acid, gasoline, caustic and metal chip attacks.



GRO-CORD RUBBER CO.
LIMA, OHIO

Canadian Plant
GRO-CORD RUBBER CO. OF CANADA LTD.
Tillsonburg, Ontario

Built to Burn



Wartime makeshifts contributed to this spectacular blaze near Dallas, Texas. A magnesium bomb-casing plant was housed in a combustible building.

ON THE NIGHT of December 15, 1943, the business district of Dallas was bright as a summer noon. Five miles away, more than half a million dollars was spectacularly on fire—a new incendiary bomb-casing plant, stacked high with government magnesium. Victims of war-time priorities, the plant had been allotted a part-wood building, with plywood ventilating ducts, for making incendiary bombs.

In that time of widespread use of magnesium for fire-bombs, ignorance of its complex combustion habits was still too general. A plywood ventilating duct had caught fire that winter night, stationed as it was . . . 18 inches from a magnesium mold heated by a gas flame. The building, obviously built to burn, became an enormous bomb. To fight the blaze at its beginning, streams of carbon tetrachloride from hand-thrown glass "bulbs" were used. These were as ineffective as water on the molten magnesium. For this metal can take oxygen for combustion from water, releasing hydrogen to form additional fuel. It can burn in an atmosphere of chlorine removed

from carbon tetrachloride extinguishers. It even burns in carbon dioxide atmospheres, and combines with nitrogen under fire conditions. Yet magnesium fires can be controlled.

How this is done, can be learned from a 16-page pamphlet, *Standards for Magnesium*, released by the National Fire Protection Association. This booklet, prepared by the NFPA's expert Committee on Combustible Metals, under Chairman Hylton R. Brown of the U. S. Bureau of Mines, offers practical control measures.

Although magnesium in the pure form has a melting point around 1204°F, its alloys will melt in some cases as low as 800°. Magnesium alloys are used more and more in furniture, machine parts, appliances, buildings, airplanes and ships; they are valuable, flammable, yet controllable materials. Due to the high heat conductivity of magnesium, it is difficult to ignite a sizable piece of the metal from a small source of heat. Like wood, however, in the form of chips or powder or other finely divided state, magnesium is highly flammable.

In this new revision of *Standards for Magnesium* (NFPA No. 48), increasing stress is laid on the danger of accumulated magnesium dust, on floors, on walls, and even employees. In concise outline form, the pamphlet, directed toward foundries, processing plants and commercial storage facilities, introduces the subject by describing the properties of magnesium, spot tests for its detection, and details of its combustibility and explosibility.

Among the sections, numbered for ready reference, are discussions of storage of pigs, ingots and billets (not more than a million pounds in a pile outdoors, or half that amount, 500,000 pounds, for indoor piles); melting and casting (easy access to melt rooms, exclusion of combustible materials, extreme care in housekeeping); rough finishing (sawing and coarse grinding, approved electrical equipment, supplies of approved extinguishing powder, suitable covered steel containers); heat treating (temperature controls, boron trichloride gas for controlling oven fires, sprinklers with oven covered); storage of castings; handling and disposal of scrap (chips, turnings, foundry dust); processing-plant operations, including storage (heavy castings in piles not more than 1,250 cubic feet in volume, light castings, 1000 cubic feet); machining, grinding, buffing, wire brushing, dust collecting (wet systems, with detailed illustrations), drawing and spinning, welding, handling of magnesium fines, fire protection (supplies of approved extinguishing powder, automatic sprinklers and alarm systems, substantial tote boxes, long-handled shovels); commercial storage of magnesium.

Throughout the *Standards for Magnesium*, good housekeeping is stressed; incessant dusting, and cleaning of equipment; nonspark materials for tools, floors, benches and shoes; special clothing and face guards; handy supplies of extinguishing powder; readily accessible exits; meticulous disposal of wastes.

MACWHYTE



PREformed . . . Internally Lubricated WIRE ROPE for all equipment

From Macwhyte's complete line of a thousand and one sizes and types you get rope best suited to your equipment, designed, PREformed, and internally lubricated to provide long, safe service. (Catalog G-15.)



Wire Rope SLINGS

for lifting and moving materials and equipment in production or maintenance.

There are hundreds of types and sizes of Macwhyte Flat-Braided, Round-Braided, Single-Part, and Grommet Slings. All are custom made in length, capacity, and flexibility to meet your needs. (Catalog S-8.)



Wire Rope ASSEMBLIES

for machine parts, controls,
and operating devices.

Macwhyte Safe-Lock wire rope assemblies are made to order in length, strength, and flexibility desired. Terminals are permanently attached to one or both ends. There are many standard types. (Catalog 5201.)

Macwhyte Company, 2902 Fourteenth Avenue, Kenosha, Wis. Manufacturers of Internally Lubricated PREformed Wire Rope, Braided Wire Rope Slings, Aircraft Cables and Assemblies, Monel Metal, Stainless Steel Wire Rope and Wire Rope Assemblies. Mill depots: New York • Pittsburgh • Chicago • St. Paul • Fort Worth • Portland • Seattle • San Francisco • Los Angeles • Distributors throughout U.S.A.

Catalogs are available on request to Macwhyte Company or authorized distributor.



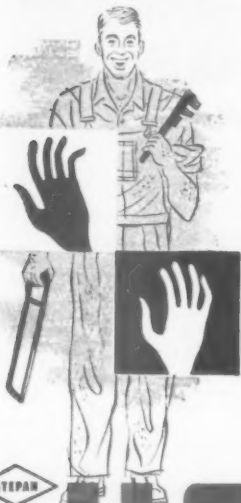
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COMPANY**
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IMPROVE EFFICIENCY

Protect

your workers

IMPROVE PRODUCTION



PH-6

A specially formulated, sulfonated oil, bland skin cleanser . . . amazingly effective in removing oils, greases, and other industrial grime. Lotion-like effect actually protects the skin . . . leaving it clean, smooth, and supple.

Neutra-Foam

New mild synthetic skin detergent with excellent foaming properties. Leaves no disagreeable soapy odor on the skin.

Both PH-6 and Neutra Foam are surprisingly economical. Write for literature and samples.

STEPAN

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COMING EVENTS

In the Field of Safety

Nov. 9, Fort Worth, Tex.

Eighth Annual Industrial Institute sponsored by Fort Worth Safety Council and Fort Worth Chapter, ASSE (Hotel Texas). L. W. Graff, safety director, Fort Worth Safety Council, Majestic Bldg., Fort Worth 2, Tex.

Nov. 11-13, Madison, Wis.

University of Wisconsin Safety Institute.

Nov. 12-13, Cincinnati, Ohio

Second Annual Greater Cincinnati Safety Conference (Sheraton-Gibson Hotel.) Kenneth R. Miller, executive director, Greater Cincinnati Safety Council, 1203 Federal Reserve Bank Bldg., Fourth and Race Sts., Cincinnati, Ohio.

Dec. 1-2, New Orleans, La.

Annual Conference, Louisiana Safety Association in cooperation with Governor's Highway Safety Committee. (Roosevelt Hotel). Charles E. Doerler, secretary, Louisiana Safety Association, Box 1148, Shreveport, La.

Jan. 29-30, Milwaukee, Wis.

Statewide Safety Conference (Hotel Schroeder).

Mar. 1-3, Atlanta, Ga.

Southern Safety Conference and Exposition (Atlanta Biltmore Hotel). W. L. Groth, executive director, P.O. Box 8927, Richmond 25, Va.

Mar. 3-4, Philadelphia, Pa.

Nineteenth Annual Philadelphia Regional Safety and Fire Conference and Exhibit. (Bellevue-Stratford Hotel). Walter W. Matthews, managing director, Philadelphia Chamber of Commerce, Safety Council, Architects Bldg., 17th and Sansom Streets, Philadelphia 3, Pa.

Mar. 24-27, New York

Twenty-Third Annual Greater New York Safety Convention and Exposition (Hotel Statler). Paul F. Stricker, executive vice-president, Greater New York Safety Council, 60 East 42nd St., New York 17.

Mar. 24, Madison, Wis.

Canners' Safety Institute (Hotel Loraine).

Mar. 30-31, Boston, Mass.

Thirty-second Annual Massachusetts Safety Conference and Exposition (Hotel Statler). Edgar F. Copell, president-director, Massachusetts Safety Council, 31 State St., Boston 9, Mass.

Apr. 9-11, Kansas City, Mo.

Central States Safety Congress (Hotel President). George M. Burns, director, Kansas City Safety Council, 419 Dwight Bldg., Kansas City 6, Mo.

Apr. 21-23, Grand Rapids, Mich.

Michigan Safety Conference and Exhibit. (Civic Auditorium). Elon J. Schantz, executive secretary, c/o Consumers Power Co., 129 Pearl St. N. W., Grand Rapids 2, Mich.

Apr. 22-24, Charleston, W. Va.

West Virginia Safety Council, Inc. Annual Conference and Exhibit. Mrs. W. C. Easley, acting managing director, 316 Masonic Bldg., Charleston, W. Va.

Apr. 28-30, Pittsburgh

Western Pennsylvania Safety Council, 28th Annual Safety Engineering Conference and Exhibit. Harry H. Brainerd, executive secretary, 605 Park Bldg., Pittsburgh 22, Pa.

May 7, Watertown, Wis.

Rock River Valley Safety Conference.

May 7-9, Roanoke, Va.

Nineteenth Annual Virginia State-Wide Safety Conference (Hotel Roanoke). William M. Myers, managing director, Richmond Safety Council, 49 Allison Bldg., Richmond 19, Va.

May 11-13, Syracuse, N. Y.

Central New York Safety Conference. Walter L. Fox, manager, Safety Division, Chamber of Commerce, Syracuse, N. Y.

May 13-15, Winston-Salem, N.C.

Twenty-third Annual North Carolina Statewide Industrial Safety Conference. (Robert E. Lee Hotel). H. S. Baucum, safety director, North Carolina Industrial Commission, Raleigh, N. C.

May 14, Green Bay, Wis.

Fox River and Lake Shore Safety Conference.

May 21, Waukesha, Wis.

South East and Lake Shore Safety Conference.

May 28, La Crosse, Wis.

Lower Mississippi Valley Safety Conference.

June 2, Rhinelander, Wis.

Wisconsin River Valley Safety Conference.

June 11, Superior, Wis.

Upper Mississippi Valley and Lake Superior Safety Conference.

Oct. 19-23, Chicago

Forty-first National Safety Congress and Exposition. (Conrad Hilton Hotel). R. L. Forney, general secretary, National Safety Council, 425 N. Michigan Ave., Chicago 11.

*Conserve Manpower
with Completely
Mechanized Scrubbing*

New **SELF-POWERED** SCRUBBER-VAC

Cleans Vast-Area Floors "By the Mile"



*Self-
Starting
GASOLINE ENGINE*

Freedom of range and four-in-one performance combine to give this Gasoline-Powered Combination Scrubber-Vac its exceptional cleaning capacity. Operating independent of power lines, the machine is free to go wherever the operator guides it... working in and out of production areas with ease... scrubbing continuously... actually cleaning floors by the mile! And this single unit — Finnell's 218G at left — applies the cleanser, scrubs, rinses if required, and damp-dries the floor — all in one operation. Thus it is capable of cleaning up to 16,000 sq. ft. per hour!

Self-starting engine eliminates rope-pulling as a means of starting. The 218G starts quickly and easily by pressing the starter button. Operator will shut off rather than idle the machine, and thereby prevent carbonizing, a cause of engine trouble. All working parts of the 218G are operated by one engine (2 cyl., 4 cycle, 9.4 hp., air-cooled). And there are no switches to set for fast or slow — slight pressure of the hand on clutch lever adjusts speed to desired rate (up to 136 ft. per minute). Two 18-inch brushes give a 36-inch scrubbing surface. The powerful vac performs quietly. Gasoline only is used for fuel (no mixing required).

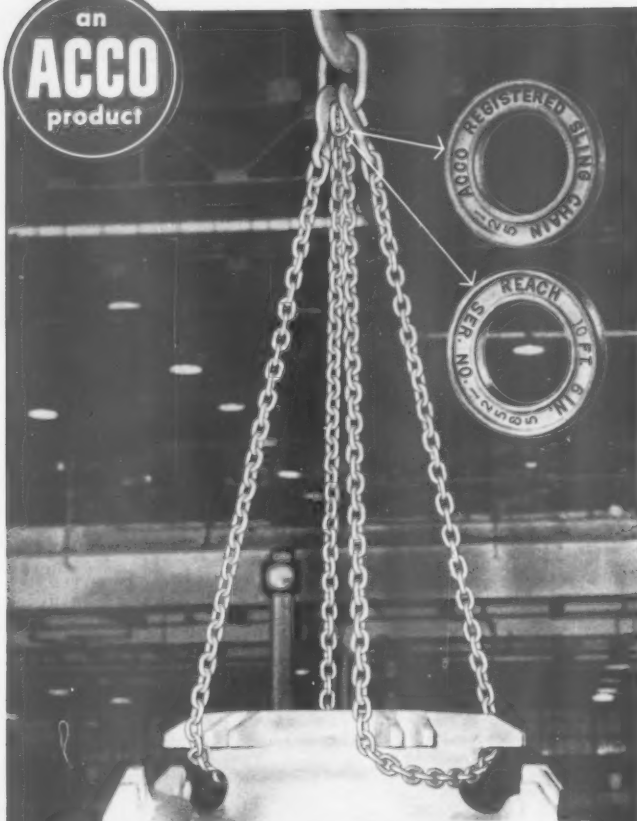
Whatever the area of your floors, find out what you would save with a Combination Scrubber-Vac. Finnell makes a full range of sizes, including electric as well as gasoline models... available on lease or purchase plan. It's also good to know there's a Finnell man nearby to help train your maintenance operators in the proper use of Finnell Equipment and to make periodic check-ups. For demonstration, consultation, or literature, phone or write nearest Finnell Branch or Finnell System, Inc., 2211 East St., Elkhart, Ind. Branch Offices in all principal cities of the United States and Canada.

FINNELL SYSTEM, INC.

Originators of Power Scrubbing and Polishing Machines



BRANCHES
IN ALL
PRINCIPAL
CITIES



ACCO Registered Sling Chains are Versatile

● Here an ACCO Registered Sling Chain is used in a double basket hitch. It could also be used as a two-legged bridle, or as a double choker. The tough 125 Endweldur ACCALLOY Chain is much lighter in weight and is easy to handle. It has great service life. The permanent identification ring on every ACCO Registered Sling Chain is your sign of safety and guarantee of quality.

See your AMERICAN CHAIN distributor. He'll show you how easy and economical it is to choose and use the best sling chains made.

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New York, Philadelphia, Pittsburgh, Portland,
San Francisco, Bridgeport, Conn.

American
Chain

Trustees, NSC

—From page 27

W. S. S. Rodgers, chairman, board of directors, The Texas Co., New York.
John Stilwell, Yonkers, N. Y.

Members elected in previous years and continuing in office:

Winthrop W. Aldrich, chairman, board of directors, The Chase National Bank, New York.

Melvin H. Baker, chairman, board of directors, National Gypsum Co., Buffalo, N. Y.

James B. Black, president, Pacific Gas & Electric Co., San Francisco, Calif.

S. Bruce Black, president, Liberty Mutual Insurance Co., Boston.

Morgan B. Brainard, president, Aetna Life Insurance Co., Hartford, Conn.

Cason J. Calloway, Hamilton, Ga.

Kenneth B. Colman, Seattle, Wash.

Cleo F. Craig, president, American Telephone and Telegraph Co., New York.

Frederick C. Crawford, president, Thompson Products, Inc., Cleveland, Ohio.

Walter J. Cummings, chairman, board of directors, Continental Illinois National Bank and Trust Co., Chicago.

Ned H. Dearborn, president, National Safety Council, Chicago. (Ex-officio)

Richard R. Deupree, chairman, board of directors, Procter & Gamble Co., Cincinnati, Ohio.

E. F. du Pont, director, Employee Relations Dept., E. I. du Pont de Nemours & Co., Wilmington, Del. (Ex-officio)

Francis J. Gavin, chairman, board of directors, Great Northern Railway Co., St. Paul, Minn.

Gustav Metzner, chairman, board of directors, New York Central System, New York.

Thomas I. Parkinson, president, The Equitable Life Assurance Society of the United States, New York.

William A. Simpson, president, William Simpson Construction Co., Los Angeles, Calif.

Herbert E. Smith, member, board of directors, United States Rubber Co., New York.

Arthur E. Stoddard, president, Union Pacific Railroad Co., Omaha, Neb.

Dr. John F. Thompson, chairman and president, International Nickel Co. of Canada, Ltd., New York.

Juan T. Trippe, president, Pan-American Airways System, New York.

Thomas J. Watson, president, International Business Machines Corp., New York.

C. E. Wilson, president, General Motors Corp., Detroit, Mich.

Charles Deere Wiman, president, Deere & Co., Moline, Ill.

Robert W. Woodruff, chairman, executive committee, The Coca Cola Co., Atlanta, Ga.

National Safety News, November, 1952

Personals

COLONEL LEONARD F. CARTER has been recently assigned as Chief of Ground Safety Headquarters, Air Materiel Command, Wright-Patterson Air Force Base, Dayton, Ohio. Prior to this assignment, he served as Chief of Safety, United States Air Forces in Europe and Director of Safety, Headquarters USAF, Washington, D. C.

During Colonel Carter's Assignment in Europe he became affiliated with the Royal Society for the Prevention of Accidents, United Kingdom. He held memberships in the Industrial and Traffic Sections, and was associated with the Industrial Safety Officers Section, Liverpool Branch. Colonel Carter also maintained liaison with the West Germany Governmental Safety Organizations and Safety Bureaus for the German States of Bavaria, Hesse and Wurttembergboden. He appeared a number of times as guest speaker at European Safety Conferences in England and on the continent.

Since Colonel Carter returned to the States, he has been elected Chairman of the Federal Safety Council, Dayton Area and nominated for Chairmanship of the Advisory Committee, Aeronautical Industrial Section, 1952-1953.

T. B. GORMAN, JR., has been appointed to direct the industrial safety program of the Chase Bag Company, New York. He has been associated with the company for 15 years and has been active in all phases of accident prevention.

The Chase Bag Co. operates 14 textile, paper and specialty bag manufacturing plants and one paper mill throughout the United States.

It should be our purpose in life to see that each of us makes such contribution as will enable us to say that we, individually and collectively, are a part of the answer to the world problem, and not part of the problem itself.—Andrew Cordier.



ACCO Registered DUALOC Slings are Lifting Tools

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THE ACCIDENT BAROMETER

Prepared by the Statistical Division, National Safety Council

Accidental deaths in July numbered approximately 9,200, or 5 per cent more than occurred in July, 1951. All classes showed some increase with the largest change recorded for home accident fatalities.

During the first seven months of 1952, accidental deaths totalled about 53,900, an increase of 3 per cent over the 1951 comparable figure of 52,400. Most of the increase occurred in home and motor-vehicle deaths, but deaths from occupational and public non-motor-vehicle accidents also were more numerous.

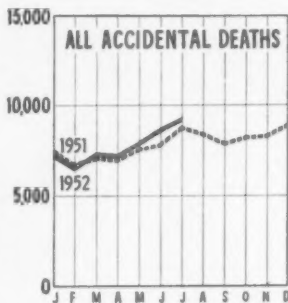
Motor-Vehicle Deaths

The July total of motor-vehicle deaths was 3,210, an increase of 2 per cent over July, 1951. Compared to 1950, it was also a 2 per cent increase.

Deaths for the seven months numbered 20,000, or 2 per cent more than the 1951 comparable total of 19,550. The seven-month death rate per 100,000,000 vehicle miles was 6.7, a reduction of 4 per cent from the 1951 rate of 7.0.

Of the 46 states reporting for seven months, 20 had fewer deaths than in 1951 and 26 had more deaths. A total of 446 cities with populations over 10,000 reported a decrease of 6 per cent for July and 4 per cent for the seven-month period.

Regional changes from 1951 in



| | 1952 | 1951 | Change |
|--------------|--------|--------|--------|
| July | 9,200 | 8,800 | +5% |
| Seven Months | 53,900 | 52,400 | +3% |

the seven-month death totals were:

| | |
|----------------|----------|
| North Atlantic |-1% |
| South Atlantic |+7% |
| North Central |+4% |
| South Central |+4% |
| Mountain |+1% |
| Pacific |+3% |

Occupational Accidents

Deaths from occupational accidents numbered approximately 1,600 in July, or 100 more than last year. The total for the seven months was 9,200, an increase of 2 per cent over 1951.

The July frequency rate for plants in community council inter-plant contests was 9.21, an increase of 6 per cent from last year. The July rate for plants in seven-ten sectional accident prevention contests conducted by the National Safety Council was 6.82, a decrease of 3 per cent. The seven-

month rate in community council inter-plant contests was 8.41—no change from 1951; while in sectional contests it was 6.58, a reduction of 6 per cent.

Public Deaths

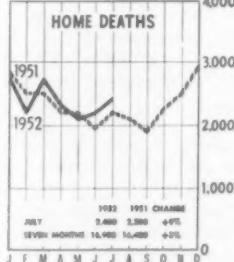
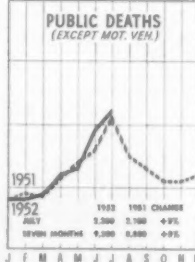
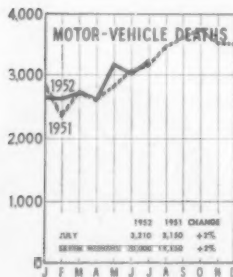
Public non-motor-vehicle accidents in July resulted in approximately 2,200 deaths, or 100 more than last year.

The January-July total was 9,200, an increase of 5 per cent over 8,800 in 1951. There was a moderate increase in deaths from drownings and small increases in fatal burns and falls. Deaths from transportation accidents showed a small decrease while deaths from firearms accidents numbered about the same as last year. Most of the increase occurred among young people 15 to 24 years of age but deaths of persons 25 to 44 years and persons 65 years and over also were more numerous.

Home Deaths

The home accident death toll for July was 2,400, an increase of 9 per cent over last year.

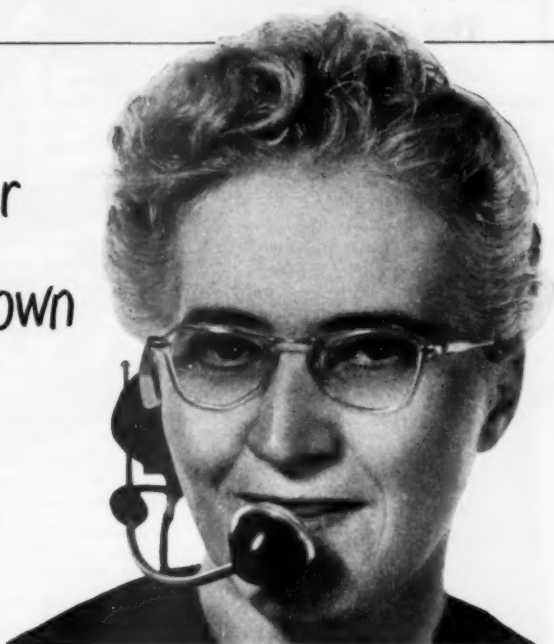
The death total for seven months was 16,900, or 500 more than in 1951. Increases occurred in fatal burns and unclassified home accidents. Deaths from falls and poisonings showed small decreases while deaths from mechanical suffocation and firearms accidents numbered about the same as in 1951. There were small reductions in deaths of young people 15 to 24 years old and persons 65 years and over. All other age groups showed increases with the largest change recorded for persons 45 to 64 years of age.



"THE KICKAPOO RIVER IS LOOSE AGAIN"

Heroic Operator helps protect town from flood

**Awarded Vail Medal for courage,
initiative and devotion to duty.
Honored at civic dinner.**



It was a quiet Saturday morning in Gays Mills, Wisconsin. A steady rain had drenched the town and folks were staying indoors.

Then suddenly a flash came by telephone to Mrs. Wilma Gander, the town's chief operator. "The Kickapoo River is loose again, fifteen miles upstream."

Although Gays Mills did not appear in imminent danger, Mrs. Gander had been through floods before and she had the foresight to see

what might happen. So she pressed the button on her switchboard that set off the village fire siren.

Immediately people began calling in and rushing in. "Where's the fire?" they asked.

"No fire," answered Mrs. Gander. "It's a flood. The Kickapoo's over its banks and the flood is headed this way."

Quickly the word was passed. People collected such belongings as they could and made their way to safer places.

Mrs. Gander next alerted the Red Cross, the National Guard and the Army and called in a lineman to help prepare the telephone exchange for high water.

The doors were made as watertight as possible, the switchboard raised on concrete blocks, and an outside tele-

phone line established on an upper floor.

Mrs. Gander stuck to her post hours after the crest of the flood had passed. By warning the town, and keeping telephone service going, she helped to protect the lives and property of hundreds of people.

The story has three other happy endings.

Mrs. Gander was honored by the grateful citizens of the town at a civic dinner. The Bell System awarded her the highly prized Theodore N. Vail Medal and presented a commemorative bronze plaque to the Utica Farmers Telephone Company.

Vail medals, accompanied by cash awards, have been given annually by the Bell System since 1920 for acts of noteworthy public service by telephone employees.



High waters. The Kickapoo River, as it neared its crest, overflowed the bridge near Gays Mills. The water was nearly five feet deep outside the telephone office.

HELPING HANDS—This is one of the many stories of the skill, courage and resourcefulness of telephone men and women in times of emergency. . . . Not all of them tell of the saving of a town or a life. But there is scarcely a minute that someone in trouble or urgent need does not turn to the telephone for help. . . . **BELL TELEPHONE SYSTEM**



The Reader's Point of View

Comments on topics of current interest are always welcome.
They need not agree with the opinions of the editors.

Overlooked Factors

SALEM, ORE.—The September NATIONAL SAFETY NEWS is replete with articles of great value to persons engaged in accident prevention. It was a pleasure to read both the technical material and the informational discussions in this issue.

I should like to comment, however, that in the section entitled "Cause and Cure" on Page 38, the analysis of the second accident ("Falling Objects") and the suggestions for prevention might tend to cause confusion in the mind of the casual reader. Naturally, the lesson contained in the last paragraph is obvious, and the precautionary reminder that a person should not attempt to grab for a falling object is well taken, but there does seem to be no clearly defined separation in the concept of *accident* versus *injury*.

It appears that this review of the accident has the effect of blaming the workman for his "carelessness," or lack of agility. An experienced safety engineer, in a search for contributory factors, would have determined, among others, answers to the following questions:

1. Was there poor arrangement of the work place?
2. Why was the conveyor open at this point? If it was necessary to have the conveyor exposed, what provisions were made to keep things from accidentally falling onto it?
3. Why was it necessary to pile the cylinder blocks two high?
4. Why was no proper rack furnished for uncured or unfinished castings?
5. Why did the castings start to fall in the first place? Were provisions made to support them?

Despite the fact that the summary cannot give all the details revealed upon examination of the circumstances surrounding this accident and resultant injury, the report seems to incriminate a conscientious, though somewhat inexperienced, employee. To me it also

indicates that the employer was not diligent in his safety training, in his job analysis and planning, and in other responsibility aspects of his entire safety program.

I make these comments purely to remind your readers that there are traps into which safety committees or other groups concerned with elimination of hazards may fall. Too many times basic techniques in accident analysis are ignored and attention is diverted from contributing factors which outline the *pattern of the accident*. This latter is a fundamental concept whereby one seeks methods of preventing recurrence.

H. SOMERFELD, Director,
Accident Prevention Division,
Oregon Industrial Accident
Commission.

Hazards of Insecticides

BOSTON, MASS.—I am considerably troubled by the article which appeared on pages 86 and 87 of the August 1952 issue of NATIONAL SAFETY NEWS entitled "Newer Insecticides Have Good Safety Record." My concern lies in the reaction that readers may have from reading this article. Unfortunately, I did not hear Dr. Durham's paper at the Industrial Health Conference in Cincinnati, and Dr. Durham has no reprints of the paper available. Consequently, I am not certain that my quarrel is with you or with Dr. Durham.

Safety engineers and industrial hygienists have been concerned with the problem posed by the manufacture and use of the newer organic insecticides. Many of these, especially the organic phosphates, are considerably more toxic than are the older type insecticides.

As a result of this, more stringent precautions must be taken if a safe record is to be obtained with them. The tone of the article

the LIGHTER SIDE

NATIONAL SAFETY COUNCIL



PLANT POISONALITIES

THE BIRD WHO PUTS ON A BIG SHOW FOR SAFETY EVERY JAN. FIRST



AND THEN FORGETS ABOUT IT BEFORE THE MONTH'S OUT!



in National Safety News tends to minimize the fact that these precautions need be taken. It also indicates that the record of the

—To page 126

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UNDERWRITERS'
APPROVED



A real "POWER HOUSE" Extinguisher that sets new standards in CO₂ PERFORMANCE!

- INCHES SMALLER...
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The Randolph "12" sets an entirely new standard for your all-purpose carbon dioxide fire defense. It retains the compactness of the famous Randolph "10", the panic-proof trigger release—costs less than 7% more than 10 lb. sizes, yet gives you 20% extra protection—a full 12 pounds of carbon dioxide!

The "12" stops gasoline, oil, paint, grease and electrical fires in split seconds—has enough CO₂ to stop larger fires, more severe fires—delivers a bigger, more powerful fire-fighting punch! And, like all Randolph Portables, anybody can use it—you know how to use it just by looking at it!

Find out, right now, how the Randolph "12" can bolster YOUR fire defense. Check the prices that give you PLUS protection at practically the same cost. For a quick demonstration, complete information or immediate delivery, call or write Randolph Laboratories, Inc., 2 East Kinzie Street, Chicago 11, Illinois.

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new
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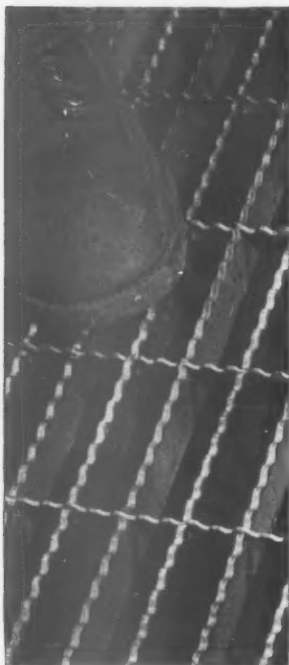
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Industrial Health

Abstracts of current literature on Industrial
Hygiene, Medicine, and Nursing

By F. A. VAN ATTA, Industrial Department, NSC

Carbon Tetrachloride

Vapor Toxicity of Carbon Tetrachloride Determined by Experiments on Laboratory Animals. By E. M. Adams, H. C. Spencer, V. K. Rowe, D. D. McCollister and D. D. Irish. A.M.A. Archives of Industrial Hygiene and Occupational Medicine 6:50-66 (July 1952).

IN SPITE OF a great deal of experimental investigation and extensive industrial use the quantitative toxicity of carbon tetrachloride has remained a question. The investigations have been generally of chronic toxicity and very little attention has been paid to the effects of a single exposure.

A considerable number of reports of injuries from single exposures, however, have indicated a surprisingly high degree of acute toxicity although these reports have not generally included measurements of vapor concentration to which the individuals were exposed. It has been possible to infer the order of magnitude of the vapor concentration from the attendant conditions and from the lack of an anesthetic effect.

In this series of experiments the subjects were albino rats, guinea pigs, albino rabbits, and recess monkeys. The rats were exposed to single exposures of varied concentration and time to find the concentration and time combinations which killed all animals and the concentration and time combinations which had no adverse effect on any animals.

Rats, guinea pigs, rabbits, and monkeys were all used in measurements of the effects of repeated exposures to various concentrations for various times. A chart is presented showing the least severe single exposure causing death of all animals, the most severe single exposures permitting survival of all animals, the most severe single exposure without detectable adverse effects on rats and the most

severe repeated exposures without adverse effects in all species.

Rats were not affected by seven hour daily exposure to five parts per million, five days per week for six months. The same conditions for other species resulted in no detectable effect on guinea pigs at five parts per million, rabbits at ten parts per million, and monkeys at twenty-five parts per million.

Application of these experimental data with animals to human exposure is always somewhat questionable. In this instance, however, the results of measured single exposures on rats appeared to agree remarkably well with the results of Lehman and Flury on single exposures of human subjects. This results in a figure of 50 parts per million for seven hour exposure for a man which may seem low in view of the many years during which one hundred parts per million has been used as a maximum allowable concentration for daily exposures. The 50 parts per million, however, will result in fairly high assurance of no adverse effects and there have been numerous reports of relatively minor adverse effects in humans at around one hundred parts per million.

Previous studies of carbon tetrachloride exposure had shown the intensities of daily seven hour exposures tolerable to human subjects without serious injury. This study was extended to the determination of repeated exposures without detectable injury. The result of the previous work, expressed in terms of a maximum allowable concentration of 100 parts per million has served to prevent serious chronic effects although breathing one hundred parts per million is recognized as possibly producing minimal disturbances in men.

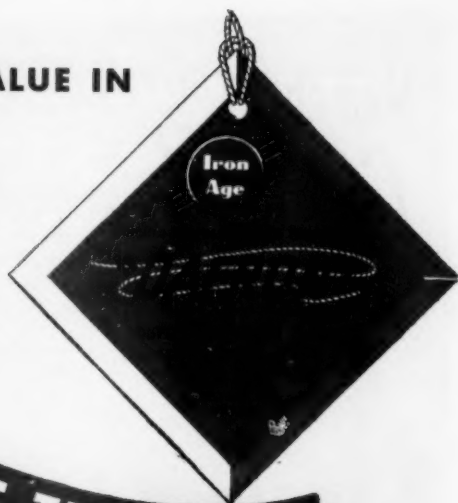
In view of the fact that the various animal species tolerated

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Stitched Throughout with
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Uppers are of soft, supple brown elk, good to look at and noted for exceptional wearing qualities. An inner cushion of Armstrong cork filler brings complete foot ease, and for added value there's the advantage of an extra protective welting.

No. 684 has an oil resistant Neo-Cord sole and heel. This is a new sole with added Neoprene—gives up to 20% longer wear. And for top value this lace-to-toe model is stitched throughout with Dacron thread that is the strongest fibre known and resists acids, chemicals, perspiration, mildew.

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Your choice of
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**STRONGER-THAN-STEEL
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five to 25 parts per million of carbon tetrachloride for daily seven hour exposures over a period of months and on the basis that man is probably not more resistant than the monkey it is suggested that 25 parts per million is the highest concentration which may be without adverse effect in human subjects undergoing uniform daily exposures of seven hours.

The application of such a conclusion as this in the practice of industrial hygiene requires some discussion. It has been the practice for many years to set up such standards in terms of a maximum allowable concentration and it has been customary to consider this in the sense of a value below which concentrations in the work atmosphere must remain. It is, however, recognized that concentrations above the standard can be tolerated for a short time.

Recognizing the fact that in most industrial work the concentration of atmospheric contamination does vary throughout the work day, the value might properly be taken as a maximum below which practically all analytical values must fall. The extent to which the vapor concentration should fall below this value might be indicated by the specification that the average of all analytical values should not exceed ten parts per million if samples are taken intermittently at various work locations and throughout the work day.

It has been customary to apply maximum allowable concentrations to evaluate repeated exposures by using a time weighted average. This is permissible if the value of concentration multiplied by time is directly proportional to the severity of toxic effect for all values of concentration and time and if the toxic effect has no chronological relation, that is if previous exposures have no bearing on the toxic effect produced by the present exposure.

It is known that the first condition is not fulfilled by the toxicity of carbon tetrachloride and there is no information on the second condition so that there is no scientific basis for the use of the time weighted average of exposures to integrate the various exposure.

The table and curve of the effects of single exposures of varying concentrations and varying durations will permit a somewhat more accurate judgment of the significance of varying exposures than does the use of the single standard maximum allowable concentration.

There has been noted unusual susceptibility to nausea and vomiting from exposure to carbon tetrachloride in some instances. It is considered that individuals showing this altered susceptibility at very low concentrations must be considered as hypersensitive and their reaction should not be the basis for establishing general hygienic standards.

Mental Handicaps

The Effect of Psychological Handicap in Two Factory Groups, by Morris Markowe and L. E. D. Barber, *The British Journal of Industrial Medicine* 9:221-226 (July 1952)

THIS STUDY was an attempt to relate the medical and psychological characteristics with the industrial effectiveness of two groups of individuals assembling lead storage batteries on conveyor lines. The two groups each consisted of 23 men and women and a subforeman.

Each worker was carefully interviewed to obtain details of habits, previous health, work experience, recent social circumstances and recent health. Their attitudes, moods and sociability were also assessed and tendencies to emotional instability, maturity and timidity were noted. Each individual was given a physical examination including recording of anthropometric data, tests of manual strength, cardiovascular efficiency, hemoglobin index and the usual clinical evaluation. A small battery of psychological tests was also given to each individual. All the workers were rated by the foreman on a three point scale as to general industrial efficiency.

There were various minor differences in both physical and mental health which made one group (Group B) generally more healthy than the other group. The subforeman in charge of Group B was also in better health and was much more self-sufficient than the one

—To page 140



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But they have found from experience — and now the Magic Eye proves in precision tests—that trustworthy, top-quality PAX products actually remove more dirt, cost less per washup!



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We manufacture _____

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National Safety Council Awards for Outstanding Records

THREE types of awards for outstanding performances in industrial accident prevention are provided for in the "Plan for Recognizing Good Industrial Safety Records" adopted in January, 1952, by the Industrial Conference and the Board of Directors of the National Safety Council.

The three types of awards are:

1. The AWARD OF HONOR, the highest award, replaces the Distinguished Service to Safety Award. It goes to industrial establishments whose experience meets rigorous statistical standards, even though it may not be injury-free. It also goes to those which complete 3,000,000 manhours without a disabling injury.

2. The AWARD OF MERIT is similar but less exacting requirements. The standards for non-perfect records are somewhat lower, and the minimum number of injury-free manhours needed to qualify is 1,000,000.

3. The CERTIFICATE OF COMMENDATION is given only for no-injury records covering a period of one or more entire calendar

years and involving exposure of 200,000 to 1,000,000 manhours.

For qualifying calendar-year experience, all three types of awards are made automatically on the basis of annual reports submitted to the Council by members. The Award of Honor and the Award of Merit may also be made on special application in two types of cases:

1. Where a qualifying total of injury-free manhours is accumulated in some period other than a calendar year.

2. Where a current period of two or more years is to be used in evaluating injury rate improvement.

Publication of awards under this plan succeeds "The Honor Roll" department formerly published in the NATIONAL SAFETY NEWS. The foregoing is but a synopsis of the award plan. For a more complete and precise statement of eligibility requirements, members should refer to the plan itself. Details may be obtained by writing to Statistics Division, National Safety Council.

Rohm and Haas Co., Philadelphia, Pa., Bristol Plant.

Standard Oil Company of California, Refining Operations.

Sun Oil Co., Philadelphia, Pa., River and Harbor Craft Operation.

Wisconsin Power and Light Co., Madison, Wis. (Entire company.)

AWARDS OF MERIT

Alan Wood Steel Co., Coke & Chemicals Division, Swedeland, Pa.

Alan Wood Steel Co., Specialties Division, Conshohocken, Pa.

Atlantic Coast Line R. R. Co., Property Protection Dept.

The Atlantic Refining Co., Philadelphia, Pa., Oil Pipeline Operations.

Bohr-Manning Corp., Watervliet, N.Y., Brockton Gas, Light Co., Brockton, Mass. (Entire company.)

Butler Manufacturing Co., Kansas City, Mo. (Entire company.)

Entire Illinois Electric & Gas Co., Motor Bus Unit, Rockford, Ill.

Central Vermont Public Service Corp., Rutland, Va. (Entire company.)

City of Seattle, Department of Lighting. (Entire company.)

Cosden Petroleum Corp., Refining Operations, Big Spring, Texas.

General Petroleum Corp., Los Angeles, Calif., Natural Gasoline Dept.

General Petroleum Corp., Los Angeles, Calif., Oil Pipeline Operations.

General Petroleum Corp., Los Angeles, Calif., Petroleum Producing Operations.

Humble Oil and Refining Co., Houston, Texas, Natural Gas Operations.

The Mead Corp., Brunswick, Ga.

The Mead Corp., Manistique, Mich.

The Montana Power Co., Butte, Montana, Natural Gas.

Sinclair Refining Co., Refining Operations.

Southern States Iron Roofing Co., Savannah, Ga. (Entire company.)

Standard Oil Co. (Ohio), Refining Operations.

Standard Oil Co. (Ohio), Oil Pipeline Operations.

Tidewater Associated Oil Co., New York, N.Y., Petroleum Exploration Operations.

University of Akron Government Laboratories, Akron, Ohio. (Entire company.)

—To page 62

AWARDS OF HONOR

Armour & Co., Union Stock Yards, Baltimore, Md.

The Atlantic Refining Co., Philadelphia, Pa., Petroleum Producing Operations.

Clark Equipment Co., Buchanan, Mich. (Entire company.)

Colgate-Palmolive-Peet Co., Ltd., Toronto, Ontario. (Entire company.)

Consumers Power Co., Jackson, Mich. (Entire company.)

The Firestone Tire & Rubber Co., Akron, Ohio, Plants.

The Formica Company, Cincinnati, Ohio, Winton Place Plant.

General Electric Co., Electronics Division, Owensboro (Ky.) Tube Works.

General Petroleum Corp., Los Angeles, Calif., Ocean and Coastwise Tanker Operation.

General Petroleum Corp., Los Angeles, Calif., Wholesale Marketing Operations.

Humble Oil and Refining Co., Houston, Texas, Petroleum Producing Operations.

Humble Oil and Refining Co., Houston, Texas, Refining Operations.

Kansas City Public Service Co., Kansas City, Mo. (Entire company.)

Magnolia Petroleum Co., Dallas, Texas, Refining Operations.

The Mead Corp., Chillicothe, Ohio Division.

Mississippi Power and Light Co., Jackson, Miss. (Entire company.)

Nash Kelvinator Corp., Detroit, Mich., Metal Furnishing Branch.

The Ohio Oil Co., Findlay, Ohio, Petroleum Producing Operations.

The Ohio Oil Co., Findlay, Ohio, Retail Marketing Operations.



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—From page 60

Waco Transportation Co., Waco, Texas. (Entire company.)
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United States Army, Corps of Engineers, Peoria, Ill., Area.

Canadian Safety Film Wins World Honors

THE SAFETY SUPERVISOR, the newest accident prevention film of the Canadian Department of Labour, recently won first prize in the "social problems category" at the world-wide Venice (Italy) Film Festival.

The Venice Festival is the oldest and probably the foremost international film competition, attracting entries from most of the major film producers in the world.

The film, which was produced for the Department of Labour by the National Film Board, is the sixth in a series entitled *Accidents Don't Happen* and deals with the position of the "safety supervisor" in the modern industrial plant.

This is the second time in three years that the Department of Labour and the National Film Board have shared the honor of winning an international competition with a safety picture. The fifth in the safety films series, dealing with safe clothing in industry, won first prize in an international competition in Chicago in 1950, sponsored by the National Safety Council.

A Time for Everything

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Hillyard floor treatments are unusually tough—withstand the pushing, pounding, shoving action of day-by-day plant operations . . . give you the freedom of extra safety underfoot—greater protection against dangerous pile-up of oil, grease, dirt . . . less fatigue at the end of your working day.

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Branches in Principal Cities

The Safety Library

Books, Pamphlets and Periodicals of Interest to Safety Men

BOOKS AND PAMPHLETS

Lead and Its Uses

Lead and Modern Industry, Manufacture, Applications, and Properties of Lead, Lead Alloys, and Lead Compounds. Anonymous. Published by the Lead Industries Association, 420 Lexington Avenue, New York 17, N. Y. 1952. VIII plus 230 pages. \$1.50.

This little book gives the impression that it was written by a committee, which it undoubtedly was. It has both the strength and the weaknesses which are common to productions of this sort.

The outstanding weakness is that it obviously had no specific audience in mind when it was written and the style varies from "lead is one of the oldest metals known to man and many of its modern uses have persisted through centuries. It was utilized in many ancient lands for strangely varied purposes," to "galvanic corrosion is generally understood to consist of the sum total corrosion, which comprises the normal corrosion that would occur on a metal exposed alone plus the additional amount due to contact with the more noble metal."

In my opinion, it would have been a much happier solution to have eliminated either the publicist writing for the 6th grade audience or the specialist writing for the engineer, or probably both, from the writing project. As the book stands, the sudden switches in style and vocabulary are a little bit dizzying.

The strength of the book comes from the same source as its weakness. It covers its subject from mining of complex lead ores to ornamentation of public buildings, and from physical properties of organic lead compounds to construction of shields for X-ray installations concisely and authoritatively. There is no such collection

of standards and specifications on this material or group of materials anywhere else in literature.

Of particular interest to safety and health personnel will be the chapter on radiation protection and the chapter on the safe handling of lead and its products. The chapter on safe handling is only three pages and one might be inclined at first glance to become caustic about the cursory treatment accorded our best known industrial poison.

On further thought, it is much more reasonable to congratulate the Lead Industries Association on having set down perfectly straightforward and factual information on this subject in this type of a book and on having included sufficient references to more specific sources if they are needed. It is not likely that such a chapter could have been included in this type of book even 15 years ago and is certainly a practical and encouraging indication of the increasing interest of a whole industry in questions of industrial health and safety.

F. A. Van Atta

Occupational Poisoning

Poisoning, a Guide to Clinical Diagnosis and Treatment, by W. F. Von Oettingen, published by Paul B. Hoeber Inc., Medical Book Department of Harper & Bros., 49 E. 33rd Street, New York 16, N. Y. X'plus 524 pages. 1952. \$10.00.

As is stated in the title, this book is aimed primarily at the medical practitioner who is concerned with the diagnosis and treatment of poisoning. It is divided into sections which are probably most convenient for this purpose. There are short discussions of the classification and diagnosis of poisoning, the legal responsibilities of the physician treating the poisoning case and the emer-

gency measures which should be taken and the equipment which the physician should have immediately available for such treatment.

The section on diagnosis gives some suggestions about taking the history, in particular about the observation for objective signs of the source of the poison in the patient's surroundings, and then provides tabular listings of the poisons which may cause changes observable in the various body systems. There is finally a listing of the biochemical changes which may be produced by various poisons and an alphabetical listing of simple laboratory tests available to the individual practitioner in his office or to the small hospital laboratory for 72 of the most common toxic agents.

Treatment in general is covered briefly in a 25 page section. The fourth and largest part of the book is a brief discussion of the symptoms and treatment of poisoning by 461 different materials covered in 267 pages. This abbreviated treatment is supplemented in each instance by references to the original literature giving more complete treatment of the subject.

The book seems to cover adequately and admirably the field at which it is directed, a practical and compact guide to the recognition and treatment of the common poisonings, both acute and chronic.

F. A. Van Atta

Aeronautics

Air Craft Crash Rescue Problems. By George H. Tryon III. Published by National Fire Protection Association, 60 Battery March St., Boston, Mass., 1952. 16p. Price \$1.50. (NFPA Aviation Bulletin No. 82).

Civil Defense

Handbook of Emergency Defense Activities. April-Sept. 1952. Published by General Services Administration. 119p. 1952. For sale by the Superintendent of Documents, Washington 25, D. C. Price 30¢.

—To page 138



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Genuine Horsehide upper leather noted for extreme wear and flexibility.
DRIES SOFT • STAYS SOFT



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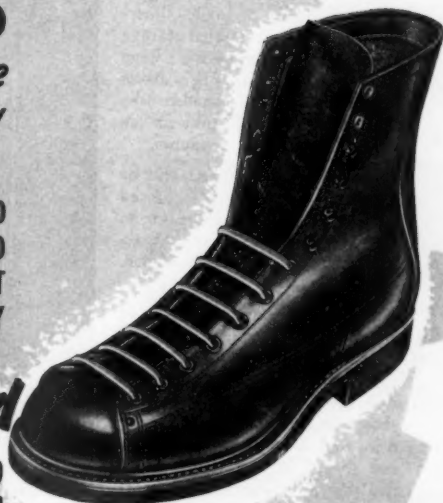
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Chemical Laboratories

—From page 33

vessel. This can be accomplished with venting devices (e.g. grooved stoppers), if the vapors are neither explosive or toxic. Otherwise, dark or refrigerated storage areas would be necessary. Electric controls on refrigerators should be located outside the storage chambers to prevent the accidental ignition of vapors.

98. Containers of flammable or caustic materials should be stored in crocks or in lead trays so that in case of accidental breakage the material will be confined.

99. Metallic sodium and potassium must be kept in stone or glass containers under kerosene. Phosphorus pentoxide containers should be kept tightly closed. Anhydrous aluminum chloride should be supplied in small quantities and once opened the material should be stored not longer than three weeks.

100. Finely divided magnesium or zirconium, dimethylarsine, triethyl bismuth, bromates, nitrogen halides, Grignard reagents, and organic zinc compounds all require cautious handling and storage.

101. The alkaline metals—magnesium, sodium, potassium, aluminum—when powdered, will all react with carbon dioxide. This means that carbon dioxide ex-

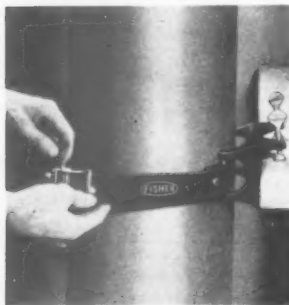


Figure 16. A compressed gas cylinder strap to hold the cylinder in an upright position as it is being used.



Figure 17. Personal protective equipment is essential whenever hazardous material is handled.

tiguishers cannot be used on them should they burn.

Flammables and Explosives

102. The quantity of ordinary flammable chemicals present in a laboratory workroom should be kept as small as possible. In no case should the supply be greater than that required for one shift or one day. Where there is a rapid turnover of flammable solvents, workroom containers should not hold over five gallons. (Fig. 11.) Usually one-gallon containers will be large enough. These should be of the type listed by the Underwriters' Laboratory, the Factory Mutuals Laboratory, or other such testing organizations.

103. Operations involving volatile flammables should be carried on under exhaust hoods, within troughs or large trays with raised edges. Should a fire start, it may be controlled much more easily if the burning material can be confined.

104. Large quantities of explosives or flammables should be

stored in isolated storage sheds which are fire-proof, water-proof, well ventilated and equipped with automatic fire extinguishing equipment.

105. Every effort should be made to insure strong natural ventilation of those areas that store flammable or explosive materials. The ventilating system outlets should be located so that discharge fumes cannot collect and create an explosion hazard.

106. Smoking should be discouraged in laboratory workrooms and storage rooms, and absolutely forbidden wherever a fire or explosion hazard is possible. Areas in which smoking is permitted should be indicated. Such areas should be clearly marked and kept clean and comfortable.

107. In storing ethers, extreme care should be exercised to prevent the formation of explosive peroxides. Activated charcoal or aluminum oxide can be used in stored ether to absorb the peroxide. Specific inhibitors can be used with some ethers to prevent

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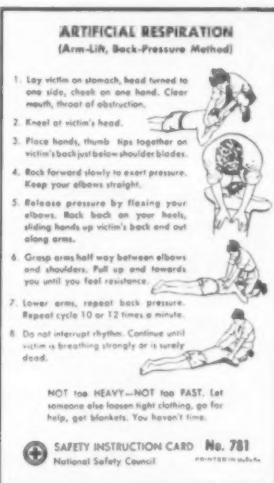


Figure 18. All laboratory personnel should know how to administer artificial respiration. Instruction cards like this are useful reminders.



Fire Fighter here discharges FogFOAM onto burning gasoline through 2½" FFF Nozzle.

FogFOAM puts smothering blanket over flaming liquids

Rockwood Nozzle Turns out Perfect Proportions of Foam, Air and Water to put out highly volatile flammable liquids; action is instant

Just 3 parts of Rockwood Double Strength Foam added to 97 parts of water, and you've a special "mix" that's death to fire.

It does its job through a special Rockwood FogFOAM nozzle that turns it into smothering FogFOAM. You get far greater fire fighting extinguishing action than ever possible with old style chemical or mechanical foam equipment.

Tank-truck and airplane crash fires — fires aboard ocean going tankers — fires in refineries and industrial plants — are quickly and effectively smothered.

What's more, Rockwood Double Strength FOAM is faster spreading, flows freely at sub-zero temperatures, will not corrode and can be easily washed away after fire is extinguished.

Rockwood proportioning systems automatically control ratio of FOAM liquid to water ensuring proper proportioning regardless of number of nozzles used. They can be custom engineered to your requirements.

Plan now to have a Rockwood Engineer recommend the right fire fighting equipment to meet your needs. Mail coupon below.



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Engineers Water . . . to Cut Fire Losses



Rockwood Type FFF FogFOAM Nozzle with FogFOAM Screen available for service on 1½", 2½", 3½" fire hose lines. Nozzles discharge Solid FOAM (with shaper), and High Velocity WaterFOG as well as FogFOAM (with screen). Range of FogFOAM with shaper approximately 60 feet, with screen 30 feet.



Fleet of Tankers is equipped with FFF Nozzles and proportioning system. Shown here, FogFOAM being discharged on deck and water during test. Ships must be protected from spill fires on water as well as aboard ship.



Rockwood Double Strength Foam — available in 5 gallon cans or 60 gallon drums. Tested by Underwriters' Laboratories.

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Chemical Laboratories

—From page 66

the formation of explosive peroxides. When ether is distilled, if the volume is reduced beyond 10 per cent, a peroxide explosion hazard results.

108. A simple potassium iodide test will determine whether or not peroxides have formed. It is advisable to make such a test before any quantity of ether is used.

Toxics

109. All laboratory reagents must be considered as toxic, even though only some are labelled as such.

110. In laboratories where toxic material is handled, personal hygiene cannot be over-emphasized. Showers and complete clothes changes should be compulsory at the end of each work day. People working with some toxic materials such as lead or nitrobenzol should have periodic medical check-ups.

111. The toxic effect of many chemicals is underestimated. For example, hydrogen sulfide, mercury and the oxides of nitrogen:

a. Hydrogen sulfide in concentrations greater than 20 parts per million⁶ is toxic and produces respiratory paralysis. The intensity of its characteristic rotten egg odor cannot be taken as a warning, since after a very short exposure the sensitivity of the nose to this odor decreases markedly. Mixtures of this gas with air in the range of from 4 to 46 per cent by volume are explosive.

b. In a very few minutes under normal atmospheric conditions an exposed surface of 4 square inches of mercury can produce toxic concentrations, (0.2 mg/m³) in a small workroom. The probable safe concentration⁷ of mercury for an eight hour exposure is 0.1 mg/m³. It is necessary, therefore, that mercury be used only in well-ventilated rooms, and that where the exposed surface is large, several manometers for instance, the work area be constantly monitored. (Fig. 12.)

c. The effects of exposure to the oxides of nitrogen are sometimes not manifest for 48 or 72 hours. A single cough at the time of exposure may be

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Figure 19. Fire extinguishers and stretchers should be located conveniently in corridors outside laboratory workrooms. (Courtesy Phillips Petroleum Co.)

Table I—Examples of Incompatible Chemicals

This list is not complete, nor are all incompatible substances shown.

| Chemical | Keep out of contact with: |
|---|---|
| Alkaline metals, such as powdered aluminum or magnesium, sodium, potassium, etc.... | Carbon tetrachloride or other chlorinated hydrocarbon, carbon dioxide and the halogens. |
| Acetic acid | Chromic acid, nitric acid, hydroxyl compounds, ethylene glycol, perchloric acid, peroxides, permanganates. |
| Acetylene | Chlorine, bromine, copper, fluorine, silver, mercury. |
| Ammonia, anhydrous | Mercury (in manometers, for instance), chlorine, calcium hypochlorite, iodine, bromine, hydrofluoric acid anhydrous. |
| Ammonium nitrate | Acids, metal powders, flammable liquids, chlorates, nitrites, sulfur, finely divided organic or combustible materials. |
| Aniline | Nitric acid, hydrogen peroxide. |
| Bromine | Same as for chlorine. |
| Carbon, activated | Calcium hypochlorite and all oxidizing agents. |
| Copper | Acetylene, hydrogen peroxide. |
| Chlorates | Ammonium salts, acids, metal powders, sulfur, finely divided organic or combustible materials. |
| Chromic acid | Acetic acid, naphthalene, camphor, glycerine, turpentine, alcohol and flammable liquids in general. |
| Chlorine | Ammonia, acetylene, butadiene, butane, methane, propane (or other petroleum gases), hydrogen, sodium carbide, turpentine, benzene, finely divided metals. |
| Chlorine dioxide | Ammonia, methane, phosphine, hydrogen sulfide. |
| Cumene hydroperoxide | Acids—Organic or inorganic. |
| Flammable liquids | Ammonium nitrate, chromic acid, hydrogen peroxide, nitric acid, sodium peroxide and the halogens. |
| Fluorine | Isolate from everything. |

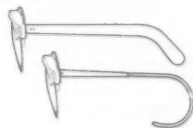
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LOW-COST PROTECTION IN 1¼ OZ.!



One-piece curved impact-resistant acetate lens can be replaced in seconds. Interchange clear with transparent green. Can't be jarred loose. Reinforced bridge is integral part of frame, gives extra protection and comfort.



Ful-Vue temples, spatula or flexible cable styles, provide unrestricted wide-angle vision. Both styles with optical hinges.



BAL-spec is unusually comfortable. May be worn effectively over regular glasses or corrective safety lenses.



Here's an all-acetate spectacle-type eye shield that meets a long expressed need. Especially suited for workers, supervisory personnel and plant visitors in semi-hazardous areas. BAL-spec weighs only an ounce and a quarter! It affords an unusually wide field of view. Frame is extra sturdy. Spatula temples especially desired by women because they don't muss hair. The one-piece acetate lens, of course, meets all U.S. Bureau of Standards requirements. Each BAL-spec individually sealed in cellophane. Ask your

Bausch & Lomb supplier for descriptive literature, free sample to examine and test in your plant. Or write Bausch & Lomb Optical Company, 90311 Smith St., Rochester, N. Y.

PACKAGED FOR VISITORS!

You provide sanitary protection for plant visitors by cleaning BAL-spec and re-inserting and sealing in dustproof polyethylene bags. They're available plain or with your imprint.



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**ALL-PLASTIC
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Wears like iron — takes endless rubbing, scraping, snagging, and still gives full protection.

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Positively will not blister, crack or peel. Its longer lasting quality means greater economy.

Also: Three-quarter and long coats, aprons, coveralls and many other styles. All clothing made in black or yellow.

*Sawyer fabrics are coated by The Brunns Company, a division of

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Chemical Laboratories

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all the warning there is of an exposure that may result in serious lung edema and death.

112. Mercury should be handled over raised-edge trays so that any spillage can be completely recovered. A high-speed aspirator, fitted with a trap and a fine nozzle, is useful to recover mercury caught in small cracks, but there is not much that can be done to remove it from porous material. Contaminated surfaces, bench tops, wooden or concrete floors, can be treated with am-

monium or calcium polysulfide according to the Randall process.

Corrosives

113. Most of the damage caused by corrosives in laboratories occurs when attempts are made to move large quantities or to transfer large quantities from one vessel to another.

114. Cup goggles and face shields, gloves and aprons should be worn whenever acids or alkalis are transported or transferred. (Fig. 13.) Large quantities of bicarbonate of soda should be available wherever these materials are used. Spills should be

Table I — Continued

| Chemical | Keep out of contact with: |
|---|--|
| Hydrocyanic acid | Nitric acid, alkalis. |
| Hydrogen peroxide | Copper, chromium, iron, most metals or their salts, alcohols, acetone, organic materials, aniline, nitro-methane, any flammable liquid, combustible materials. |
| Hydrofluoric acid, anhydrous | Ammonia, aqueous or anhydrous. |
| Hydrogen sulfide | Fuming nitric acid, oxidizing gases. |
| Hydrocarbons (Butane, propane, benzene, gasoline, turpentine, etc.) | Fluorine, chlorine, bromine, chromic acid, sodium peroxide. |
| Iodine | Acetylene, ammonia (aqueous or anhydrous), hydrogen. |
| Mercury | Acetylene, fulminic acid, ammonia. |
| Nitric acid (concentrated) | Acetic acid, aniline, chromic acid, hydrocyanic acid, hydrogen sulfide, flammable liquids, flammable gases. |
| Oxalic acid | Silver, mercury. |
| Perchloric acid | Acetic anhydride, bismuth and its alloys, alcohol, paper, wood. |
| Potassium | Carbon tetrachloride, carbon dioxide, water. |
| Potassium chlorate | Sulfuric and other acids. |
| Potassium perchlorate | Sulfuric and other acids. (See also Chlorates) |
| Potassium permanganate | Glycerine, ethylene glycol, benzaldehyde, sulfuric acid. |
| Silver | Acetylene, oxalic acid, tartaric acid, fulminic acid, ammonium compounds. |
| Sodium | Carbon tetrachloride, carbon dioxide, water. |
| Sodium peroxide | Ethyl or methyl alcohol, glacial acetic acid, acetic anhydride, benzaldehyde, carbon disulfide, glycerine, ethylene glycol, ethyl acetate, methyl acetate, furfural. |
| Sulfuric acid | Potassium chlorate, potassium perchlorate, potassium permanganate (or such compounds with similar light metals, as sodium, lithium, etc.). |

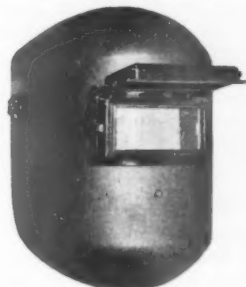
Adapted from the Dangerous Chemicals Code, 1951, of the Bureau of Fire Prevention, City of Los Angeles Fire Department.



SELLSTROM *Quality Eye and Face* SAFEGUARDS

Published by Sellstrom Manufacturing Company, 622 No. Aberdeen St., Chicago 22, Ill.

THE NEW, IMPROVED "LIFT FRONT" PLATE RETAINER ON 243-S HELMET



No. 243-S

Your welders will welcome the convenience offered by this new "Lift Front" Plate Retainer. It is especially desirable because the inner clear protective plate is mounted in a separate stationary frame behind the filter plate. Thus the clear plate is retained in a permanent position even when the filter plate is lifted. In this way the eyes are at all times protected against flying slag. The filter plate and the clear protective plate are held in position by separate tension springs.

This "Lift Front" Plate Retainer is moulded from "Durez" plastic. It combines light weight with strength. A pressed steel cover front offers extra protection if the helmet is accidentally dropped.

Sellstrom No. 243-S Welding Helmet

The Sellstrom No. 243-S Welding Helmet shown here is of one-piece construction, made of the same tough fibre which is highly popular in all Sellstrom Helmets. By use of plastic knobs at the back and sides it can quickly be adjusted to fit any head.

This perfectly balanced helmet is easily held in any desired position

by adjustable tension springs. For extra comfort it has a specially designed cushion of genuine top grain hatter's leather, which is held in place by snap fasteners.

Send for a sample of the new No. 243-S Helmet for examination. We will be glad to give you the name of a nearby dealer.

SEL-XX WELDING PLATES IN PEEP HOLE INSPECTION PACKAGES



"Sel-XX" Welding Plates are as perfect as modern electronic equipment and continuous inspection can possibly produce. The optical blanks are thoroughly inspected at each and every manufacturing operation. The edges are smoothly finished and the corners rounded as a safety measure. They are graded for density by electronic instruments, thus assuring accurate density according to number designations. They excel all Federal Specifications.

Each complete unit, comprising the Sel-XX filter plate, the cover plate and the gasket, is enclosed in an individual package with a peep hole cut-out, thus permitting accurate inspection without removing the plate from the package. The plate density is clearly in sight at all times. This also prevents breakage and scratching as the plate need not be removed from the package until it is actually placed into the plate retainer on the welding helmet.

Your welders will greatly appreciate the inspection feature. It also saves time for the stock clerk as well as

the welder because the plate can instantly be inspected if desired.

It is to your advantage to inspect these "Sel-XX" welding plates as they offer you top quality, convenience and render a completely satisfactory service.

FEATHERWEIGHT CLEAR LUCITE ENLARGED JUMBO EYE SHIELD



Safety engineers and factory workers alike are very enthusiastic about the new enlarged No. 39 One-Piece Jumbo Lucite Eye Shield, which gives 92½% optical clarity by laboratory test.

This unusual eye shield jumped into almost instant popularity when it was first offered. Because of a continuous flow of requests for this eye shield in the larger size, we now offer this popular shield in four sizes:

- 39-A; 4¾" lens
- 39-B; 5" lens
- 39-C; 5½" lens
- 39-D; 6" lens

This is an extremely comfortable eye shield, so light that the wearer hardly realizes that his eyes are fully protected. It will render 100% satisfactory service to even the most critical industrial worker. When you order this shield in standard dozen lots, we suggest four each of the 39-B and 39-C and two each of the 39-A and 39-D.

Be sure to specify the No. 39 Sellstrom Jumbo Eye Shield when ordering. If your dealer cannot supply you, write us direct.

neutralized and cleaned up immediately.

115. Polyethylene reagent bottles will greatly reduce the chance of spills and splashes from accidental breakage; but, since these containers are so light, they very easily overturn when they are partially full.

116. Careful attention should be paid to the storage of corrosives. Carboys should never be stacked more than one tier high, and should be moved only in proper-wheeled carriers. Whenever a liquid is poured from a jug to a smaller container, the jug should be supported in a pouring rack and not held in the hands. (See Fig. 14.) Smaller containers should be shelved within easy reach and moved only in protective carrying jackets.

Compressed Gases

117. Compressed gases should be stored vertically, with the shipping caps on. (Fig. 15.) Oxygen cylinders should be separated from cylinders of flammable gas-

es. Gas storage areas should be isolated from laboratory workrooms and from other storage areas.

118. If cylinders are stored out of doors it may be necessary in summer time to keep them under a water spray so that internal pressure will remain within safe limits.

119. A cylinder should be clamped or chained in an upright position while being used. (See Fig. 16.) Flammable gas containers should always be grounded.

120. Reduction valves, gauges and other fittings used for oxygen cylinders should not be used on other cylinders. Usually the threading on cylinder fittings prevents their interchange, but with homemade installations and small cylinders with clamp-on adapters it is quite possible to exchange fittings. Every effort should be made to prevent this. Fittings for oxygen cylinders must be kept free from oil and grease.

121. If it becomes necessary to heat gas cylinders to increase the flow of gas, it should be remembered that each cylinder is fitted with a fusible pressure releasing plug. For this reason hot water only should be used as a heating medium and the cylinders should never be heated above 120° F.

122. Extremely corrosive gases like chlorine and hydrogen bromide should be bought and stored in small quantities only, unless they are to be used in a relatively short time. Valves on these cylinders deteriorate rapidly. Everyone working with these gases should know what to do if a valve should let go.⁸

IV. OPERATIONS

Experimental Work

123. Whenever a laboratory project or experimental work is being started, the chemist should consider all the risks likely to be involved and equip himself accordingly. In addition to his personal safety glasses, face



Yes, they had
a Watchman
BUT—
the WATCHMAN
DID NOT WATCH!
Who watches YOUR
watchman?

Play SAFE

Install the Tamperproof CHICAGO Watchlock System



It must be good—it's been used all over the world for many years. The durable CHICAGO system can be installed in a few hours—with a screwdriver! Costs little—lasts a lifetime. . . Quickly repays its cost because it will reduce your insurance rate!

EXTRA PROTECTION
against FIRE, THEFT
and SABOTAGE.



FILL IN and MAIL NOW

CHICAGO WATCHLOCK
Div. Great Lakes Industries, Inc.
1324 S. Wabash Ave., Chicago 5

Gentlemen: Send us your folder of details, and prices on the various CHICAGO Watchlock models

My name

Firm name

Street..... City..... State.....

"The first—and
still the first!"

FIRST *Provide Protection*



Improved Foot Guard



Equipped with full Sole

"SANKEY" FOOT GUARDS consist essentially of a metal shield to be worn over the shoe whenever the foot is in danger of being either crushed or cut. The metal shield is designed to furnish a maximum amount of protection to the entire front of the foot—not merely the toes alone, but also to the instep against hazards from falling, rolling or flying objects, or from accidental tool blows. Write TO-DAY for literature or a trial pair.

ELLWOOD SAFETY APPLIANCE COMPANY

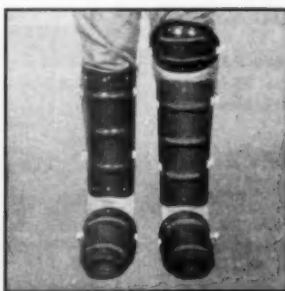
219 SIXTH STREET

ELLWOOD CITY, PENNA.



"SANKEY" Foot-Shin Guard

These guards are being used by adx operators, cattle herders and shacklers, pneumatic tool operators and handlers of piled scrap, steel, pigs, billets, etc.



"SANKEY" Shin-Instep Guard and Knee-Shin-Instep Guard

Designed for and used by the paper pulp, forest service, sugar cane workers, etc.

a little dust or a **LOT**

HOFFMAN *has the right kind and size of* **VACUUM CLEANING EQUIPMENT** *to remove your hazard*

Put your dust problem up to Hoffman. Our engineers have helped every type of industry to eliminate dust hazards, including abrasive toxic and explosive types. The complete line of Hoffman vacuum cleaning equipment is built for heavy-duty industrial service... higher suction, greater capacity... available with T.E.F.C. Class I and Class II motors for hazardous locations. Write for Free Survey and descriptive bulletins.



portables

HoffcoVac 15
operates 35-foot
length of hose



HoffcoVac 30
operates 50-foot
length of hose

Also, HoffcoVac 50 and 75 for use with longer hose lengths, on heavier dust accumulations. PLUS Gasoline-Engine Powered Model.

Hoffman also builds Multi-stage Centrifugal Blowers and Exhausters, for air or gas, in a wide range of capacities, PRESSURES and VACUUM.

U. S. HOFFMAN

MACHINERY CORPORATION
AIR APPLIANCE DIVISION
111 FOURTH AVE., NEW YORK 3, N.Y.
CANADIAN PLANT: NEWMARKET, ONT.

masks, hoods, gloves, aprons, wired or shatter-proof glass shields, portable steel barriers, portable fire extinguishers of the proper types, and respiratory protective devices should be available to him and they should be used. (Fig. 17).

124. All purpose gas masks should be available in every work and storage room; but since these devices are useful only in atmospheres of limited contamination they should be used for self rescue purposes only. Oxygen supplied breathing apparatus should be available if any sort of work is to be done in contaminated atmospheres.

125. If it is necessary to leave an experiment or a reaction unattended, a sign should be displayed on which is given emergency information: the type of reaction, the kind of extinguisher to be used in case of fire, and the order in which gas, water, steam, electricity, etc., should be shut off.

126. No-smoking signs should be displayed near flammable or explosive processes. Exothermic chain reactions and confined poly-

merizations should be conducted in isolation.

127. Regardless of the work being done, no one should be left alone in a laboratory. If it is impossible for two or more people to work in the same room, someone should check up on the solitary worker periodically.

Personnel

128. All laboratory personnel should be given enough instruction in the type of work done in the laboratory so that they will be able to appreciate the hazards of their own work and those of the work done around them.

129. The use and the hazards of new or unusual equipment must be thoroughly explained.

130. It is particularly important that new people be properly indoctrinated. Careful instruction should be given in the use of personal protective equipment and fire fighting apparatus. A thorough first aid course is essential, even though the laboratory policy requires that all injuries be treated by the laboratory physician or his representative.

Warning at Blind Exit



A BLIND EXIT from an alley or building creates a hazard for the pedestrian who may walk thoughtlessly into the path of a car. The driver may neglect to sound his horn.

To provide warning at such locations, the installation shown above includes a horn, a red beacon light and a standard enameled metal warning sign. Approximately 15 feet inside the exit opening

the car passes over a short length of tubing or actuator. The horn operates automatically for two seconds and the light for eight.

In addition to alleys, garages, parking lots, etc., this type of signal can be used in plants where industrial power trucks are operated. The device is manufactured by Nu-Way Signal Company, 717 North Parkside Ave., Chicago 44.

new **PACKAGED** carbon dioxide **FIRE EXTINGUISHING SYSTEM**

inexpensive, simple, sure!

any pipefitter
can install it



Do you want maximum fire-fighting power at minimum cost? Then you want the new Kidde Standard Pak. It's an inexpensive ready-made system you can build in for protection against tough fires in normal flammable liquid hazards.

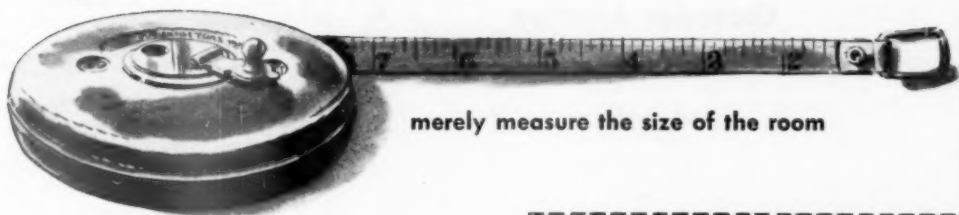
Anyone who can cut pipe can set up this pre-engineered fire extinguishing "package." Choose from six sizes for volumes up to 6,000 cubic feet.

Every kit contains Kidde rate-of-rise heat detectors, Kidde Multijet nozzles, and automatic discharge heads. Pipe and fittings are optional, as are pressure trips and switches, remote controls, sirens, gongs.

For full information send the coupon.



pre-engineered



merely measure the size of the room

Kidde

Walter Kidde & Company, Inc.

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WALTER KIDDE & COMPANY, INC.
1145 MAIN ST., BELLEVILLE 9, N. J.

Gentlemen: Please send me details on the
New Kidde Packaged Fire Extinguishing System.

NAME _____

FIRM NAME _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____



*Shipped complete with
adjustable swivel back*

Being used by —

General Electric Company
Westinghouse Western Electric Co.
Chevrolet Aviation
United States Time Corporation
and others

* * *

SILVER TROY MIRROR CO.

Division of
SILVER TROY INDUSTRIES
 92 Lock Street Newark, N. J.

It is particularly important that all laboratory personnel know how to apply artificial respiration. (Fig. 18).

Maintenance

131. An inspection and maintenance schedule for all laboratory equipment should be established as part of regular laboratory operations.

Fire Protection

132. A periodic survey should be made of all laboratory fire fighting equipment and if necessary the equipment redistributed. It is foolish to expect laboratory fire fighting requirements to remain static.

133. Extinguishers should be located conspicuously in hallways and near the doorways of laboratory workrooms. (Fig. 19.) If several extinguishers are needed in a particular workroom, they should be freely accessible from all parts of the workroom. Marking lights, signs and arrows should be used to indicate extinguisher locations.

134. Fire fighting equipment should be inspected and recharged periodically. It is necessary that laboratory personnel learn how to operate all types of extinguishers. This can be accomplished by scheduling instruction periods, or by letting the personnel discharge the extinguishers just before they are scheduled for recharging. Fire drills should be held periodically, particularly after changes in the location of fire extinguishers.

135. The hazards of using halogenated hydro-carbon extinguishing agents must be thoroughly explained. Where such extinguishing agents are used or where permanently installed fire fighting equipment uses them, extreme care must be taken to protect the personnel.

First Aid

136. Any injury, no matter how slight, should receive prompt first aid attention and, if serious, should be treated by a physician. If there is absolute certainty that movement will not aggravate an



TALK WON'T DO IT... BUT TESTING WILL...

The sure way to find out if a work shoe sole will do all you want it to do is to **MAKE YOUR OWN TESTS** under the particular conditions in your plant.

Test Vul-Cork and Vul-Cork Neoprene Soles for "anti-slip" and "anti-chip". Test them for mileage. Test them on metal shavings, cement surfaces, gravel, cinders and sand. Test Vul-Cork Neoprene for resistance to oil, grease, acids and hot metals. And test both kinds for comfort under any conditions.

Vul-Cork won't mark floors, and its edges always stay neat and trim.

Let us send you samples . . . and you decide.



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THE **Cambridge** RUBBER COMPANY
VUL-CORK DIVISION, TANEYTOWN, MARYLAND

Vul-Cork Sole Division,
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Send me.....sample Vul-Cork Soles, sizes.....

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Company.....

Address.....

JOB-TESTED IN THE WORLD'S TOUGHEST LABORATORY—AMERICAN INDUSTRY

U. S. TOBACCO COMPANY INSTALLS RANDOLPH AUTOMATIC FIRE SYSTEM

The U. S. Tobacco Company's large multiple unit dust collector presented an unusual and worrisome fire hazard, but this 150 pound Randolph Automatic System not only automatically detects and extinguishes any fire that might occur in the unit, but also shuts down the dust collector blower, and rings an alarm located on one of the lower floors of the building.

Kills Fire, Sounds Alarm and Shuts Down Machinery

As in the U. S. Tobacco installation, Randolph Systems, in addition to automatically killing the toughest fires in split seconds, can also be equipped with duct and door closers, motor, fan and machinery shut-offs, warning alarms and other auxiliary safety devices. Systems are designed for both local application or total room flooding and are ideal for dip tanks, baking ovens, spray booths and hundreds of other applications.



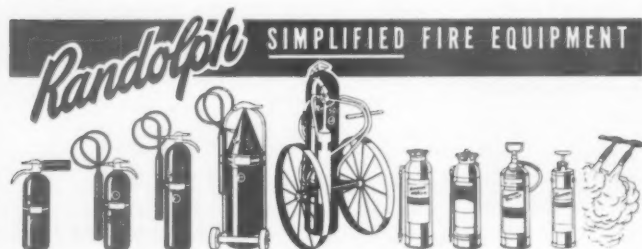
Officials of the U. S. Tobacco Co., and the Nashville Fire Department inspect the Randolph Automatic System installed on giant dust collector.



Battery of Randolph CO₂ Cylinders in U. S. Tobacco system.

Free Catalog and Engineering Service Available Without Cost

Randolph's FIRE HAZARD INDEX gives correct equipment and methods for protection against 590 typical fire hazards. Write for your free copy today. Address: Randolph Laboratories, Inc., 2 E. Kinzie St., Chicago 11, Ill.



injury, the casualty should be assisted to the aid station or hospital. But, if the injury is serious, or there is any doubt whether movement will aggravate the condition, as, for instance, when chlorine has been inhaled, medical assistance should be brought to the patient.

137. The medical people for the laboratory personnel should establish standing orders for first aid procedure. Where this is not done, every lab worker should be given detailed first aid instructions with periodic refresher courses. A first aid instruction chart and a well equipped and maintained first aid chest should be prominently displayed in each lab workroom.

138. Whenever possible, standard first aid equipment should be supplemented with materials to meet particular laboratory demands. For example, oxygen is not ordinarily first aid equipment, but it should be available in lab rooms where, for example, aniline poisoning is likely. If it is possible that certain toxic substances may be swallowed, specific antidotes should also be available.

REFERENCES

6. American Standard Allowable Concentration of Hydrogen Sulfide, ASA Z37.2 - 1941.
7. American Standard Allowable Concentration of Mercury, ASA Z37.8 - 1943.
8. Data Sheet D - Chem 51, Chlorine, National Safety Council, Chicago.

All in a Lifetime

MARIE DELIA THERRIEN celebrated Labor Day, 1952 by completing her 60th year of continuous service with American Optical Company, Southbridge, Mass. This is believed to be the longest record of any woman employed in industry today.

Miss Therrien or Delia as she prefers to be called, is the matriarch of inspectors in the company's trial lens department. In her 60 working years, she has inspected millions of these special lenses.

When Delia started work for American Optical on that Thursday morning, September 1, 1892,

there were less than 75 million people in the United States. Benjamin Harrison was President.

Jim Corbett knocked out John L. Sullivan that year, and the first official basketball game was played in Springfield, Mass. In 1892, the first long-distance call was made between the Mayor of New York and the Mayor of Chicago. The coffee percolator had just been invented, and Labor Day, itself, was just 10 years old.

Delia is a small, energetic and merry-eyed person with the vim and vitality of a woman many years her junior. She has never been sick a day in her life. "Age" is a relative term as far as Delia is concerned. Asked if she had any secrets to explain her amazing health and stamina, she replied "Why, I just never felt old."

"Of course," she added immediately, "God helped me with good health."

She thinks people worry too much today. "Life is too fast." Asked for her opinion of today's unsettled affairs, her answer was a sermon in miniature, "I've seen too many wars."

He Learned Safety The Hard Way

VERN SNYDER started thinking about safety as a career after he was a hit-and-run victim for the second time.

Vern is safety engineer and plant security officer at Armour Research Foundation of Illinois Institute of Technology, Chicago. He is the subject of a feature story in *ARF News* for September from which this article has been adopted.

The first time it was a run-away team of horses; the second, an automobile. Both accidents occurred in Hammond, Ind., his home town.

"I was knocked flat by the horses," says Vern, "but I was just a kid and was able to jump up and run away. The auto put me in the hospital with a shattered right leg for 19 weeks and a year's convalescence at home. That was in 1934. I was on my first job . . . in personnel."

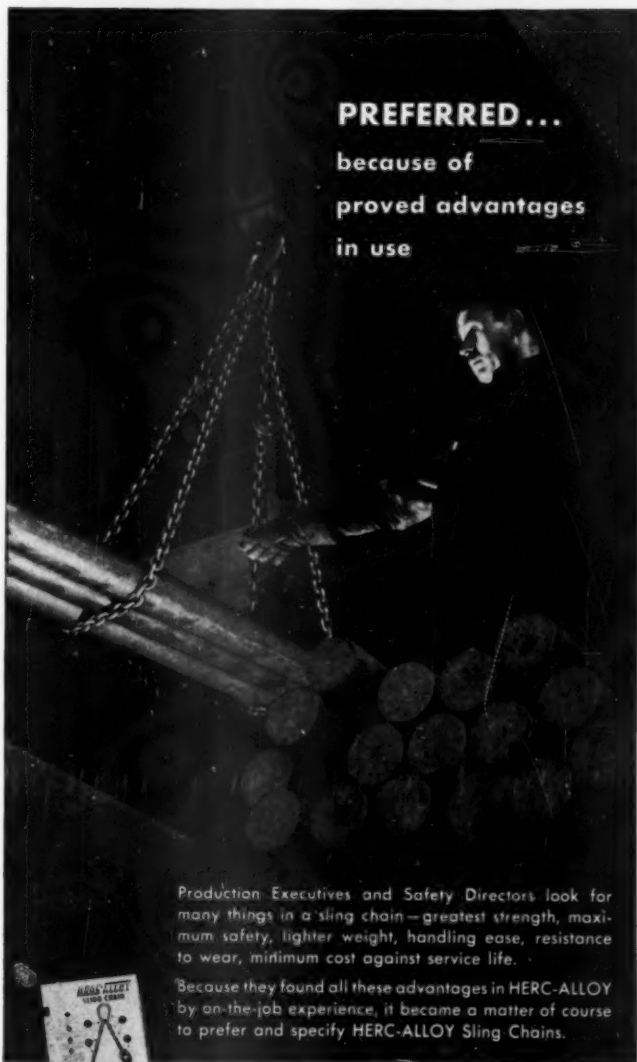
The auto that ran him down jumped a curbing and struck him

HERC-ALLOY

SLING CHAINS

PREFERRED...

because of
proved advantages
in use



Production Executives and Safety Directors look for many things in a sling chain—greatest strength, maximum safety, lighter weight, handling ease, resistance to wear, minimum cost against service life.

Because they found all these advantages in HERC-ALLOY by on-the-job experience, it became a matter of course to prefer and specify HERC-ALLOY Sling Chains.



Write for illustrated Data Book No. 3 which contains helpful information on sling chain selection and use.

COLUMBUS MCKINNON CHAIN CORPORATION

(Affiliated with Chisholm-Moore Hoist Corp.)

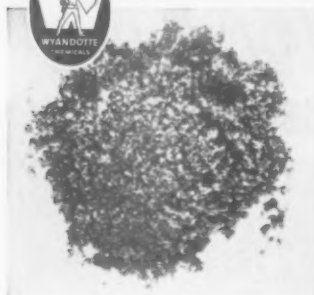
GENERAL OFFICES AND FACTORIES: TONAWANDA, N. Y.

District Offices: New York • Chicago • Cleveland

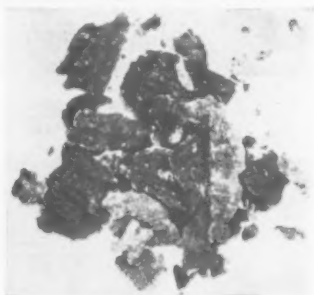
Other Factories at Angola, N. Y., Dixon, Ill., St. Catharines, Ont., Can., and Johannesburg, South Africa.



Specialists in Industrial Cleaning Products



ZORBALL



COMPETITIVE PRODUCT

Wet absorbents after 2 hours' heavy traffic

NOTE: Zorball still granular! Continues to be nonskid, safe, still usable. Easily swept from floor with ordinary brush!

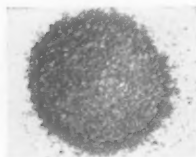
Competitive product is slippery, caked mud! Very dangerous, difficult to remove. Metal scraper needed to remove this sample!

POSITIVE PROOF! Zorball is the safest, lowest-cost floor absorbent known!



Test samples of Wyandotte Zorball and a well-known competitive absorbent sold for all-purpose use were placed in this busy runway. For 2 hours heavy trucks pounded over them. Results shown above and below.

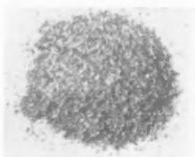
These pictures are proof that Wyandotte Zorball is the safest floor absorbent because it resists breakdown, retains nonskid properties as long as it's on the floor. This long life makes it the lowest-cost absorbent, too: less Zorball is required to do the job! Your Wyandotte representative can prove this by demonstration on your floors. Call him today. *Wyandotte Chemicals Corporation, Wyandotte, Michigan; also Los Angeles 12, California.*



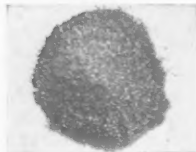
ZORBALL

ABSORBENTS BEFORE USE

Most absorbents look good when first put down. Both products were screened for these tests and the coarser particles used.

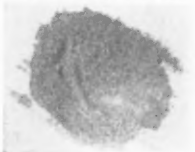


COMPETITIVE PRODUCT



DRY ABSORBENTS AFTER 2 HOURS' HEAVY TRAFFIC
ZORBALL, left, still granular. Retains nonskid properties!

Competitive product, right, is powdered dust. Has lost nonskid properties completely!



Wyandotte CHEMICALS

Helpful service representatives in 135 cities in the U. S. and Canada

Largest manufacturers of specialized cleaning products for business and industry



Vern Snyder

from the back as he was walking on a sidewalk.

Several years later he was to be elected president of the Hammond Safety Council. He also has held the same post at Joliet, where he now lives, and currently is a member of the board of directors of that body.

Formal courses in safety were few and far between in Vern's younger days—Illinois Tech was one of the first institutions of higher learning to offer a degree in this subject. Since going into safety, he has sandwiched in courses at the University of Illinois and Northwestern University.

During World War II, he was supervisor of safety for the U.S. Rubber and DuPont Companies at the Kankakee Ordnance Works, Joliet, Ill., and was a dollar a year man for the Committee for the Conservation of Manpower in War Industries. The latter group concentrated on smaller industries that could not afford safety programs.

While at DuPont he invented an acid hood that is now in general use and helped develop an ordnance soap, which is used to remove TNT from the hands of workmen.

He came to the Foundation in December 1951 after five years as assistant manager of the Greater Chicago Safety Council.

During the first six months of this year, statistics show slightly more than five disabling injuries per million man-hours of work at

the Foundation. The national industrial average is 9.06.

The Foundation severity rate for the first six months of this year is .1506th part of a day per thousand man-hours worked. The national industrial average is .97.

"I've had excellent cooperation," he explains.

Vern rates industrial hazards in the following order: First, being struck by an object; second, striking or bumping into an object, and third, strain, which includes slips and overexertion.

Hands are most frequently injured; eyes second, and the body third.

Even the person behind the desk must take care. Tilting back in chairs has resulted in injured skulls, necks, and backs; the lowly wastebasket is a fire hazard, especially when it contains highly inflammable carbon paper; open desks or file drawers can bruise shins or a heavy drawer opened too far can tip over a file cabinet; paper and staples have been known to cause nasty cuts; electrical cords have tripped up busy executives; the electric fan can nip fingers if moved while running, and thumb tacks dropped on the floor may puncture a secretary's thin-soled shoes.

His recommendations for lab safety include:

Protection against dangerous fumes; cleaning up floor spills immediately; using care when handling glass tubing; avoid throwing broken glass into rubbish; keeping aisles clean and observing general good housekeeping; wearing safety spectacles to avoid injuries to the eyes; removing rings, watches, neckties, and rolling up long sleeves when working around moving machinery; taking care not to store heavy objects too high or too close to the edge of a shelf; using protective gloves to handle hot and corrosive materials, and calling maintenance to move heavy equipment.

Serious accidents tend to run in groups of three, but Vern attributes this to coincidence rather than to superstition.

Plant security was added to Vern's duties July 15. His definition of the job is: "To prevent intentional or accidental injuries

Here's The ONLY Handbook of its kind in the Sling Field—



and it's
FREE
For The Asking

- Factual data on 12 braided sling types and on sling fittings.
- Valuable facts on sling care for longer service life.
- How to rig your own slings.
- 30 illustrations of sling uses.
- How to splice Tuffy Slings and other wire rope.

See How You, Too, Can
CUT SLING COSTS
with

Tuffy SLINGS

"Service increased about 2 or 3 times," reported by user of Tuffy Slings. Put Tuffy to the test! See how only Tuffy, with the 9 part, machine-braided wire fabric construction gives greater flexibility, strength and efficiency than conventional type slings.

Today's most talked-about sling handbook! Now going into its second big printing, this thorough, informative, useful book gives you all the up-to-date facts about lower sling costs through longer sling service. If you use slings, you want to keep this book handy! You'll be surprised how often you can use it to effect big savings on sling costs. Fill out coupon and mail it today!

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2224 Manchester Ave., Kansas City 3, Mo.

- ☐ Send FREE Tuffy Sling Handbook and Rigger's Manual
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Firm Name _____

By _____ Title _____

Address _____ City _____ State _____

NO!



Here, conventional U-Bolt clips are properly applied but rope is distorted and subject to life-shortening strains under load.

NO!

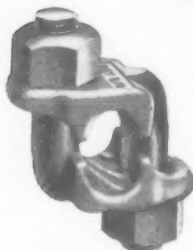


Inexperienced workmen can easily put conventional U-Bolt clips on incorrectly with saddles not on load-line. Result: Weakened rope — risk of accidents.

It CAN'T Go On Wrong

Both halves of the Laughlin Safety "Fist Grip"* clip are identical. There is no wrong way. The most careless workman can't put 'em on wrong (unless he forgets to tighten the nuts). And they're not only safer and practically fool-proof, but they're a darn sight easier to use.

Here's why:



Nuts are out in the open, can be tightened with any wrench, and don't have to be "inched around."

Bolt ends are shorter and don't get battered or bent. Nuts are always easy to remove when clip is to be re-used.

No crushed rope ends under "Fist-Grips" to cut off. Rope saved.

Fewer clips are required in many installations, so there is less work to do.

"Fist-Grip" Clips are just one example of many LAUGHLIN EXCLUSIVES in design, safety and quality that make Laughlin your best buy in wire rope and chain fittings.

Look for the trademark  to be sure

THE THOMAS LAUGHLIN COMPANY
113 FORE ST., PORTLAND, MAINE

LAUGHLIN

THE MOST COMPLETE LINE OF WIRE
ROPE AND CHAIN FITTINGS

*Patented, T.M. Reg.

to personnel or damage to property and equipment, and to keep confidential matters out of the hands of unauthorized people."

Vern's observation about safety is: "We plan for that new home, education for the youngsters, a new car, or vacation, but rarely think in terms of accidents, the very thing that may upset our other plans."

ASTM Promotions

The American Society for Testing Materials has announced the election of ROBERT J. PAINTER as executive secretary of the society and of RAYMOND E. HESS as Associate executive secretary and editor in chief, both promotions effective September 16.

This action was taken by the Board of Directors following a report of a special committee which had been appointed to recommend a successor to the late C. L. Warwick, long-time executive secretary of the society, who died suddenly April 23.

Both men have been members of the ASTM for many years. Mr. Hess has been assistant executive secretary and editor, and Mr. Painter most recently has been treasurer and assistant secretary.

Mr. Painter received his degree of Civil Engineer from Rensselaer Polytechnic Institute in 1923. Following a period on the R.P.I. faculty in the C. E. Department, he was in the Special Engineer's Office, Bethlehem Steel Company, and joined the ASTM Staff in 1931.

Mr. Hess, a native Philadelphian, is a graduate of the University of Pennsylvania in Civil Engineering. Following a short period with Day and Zimmermann, Inc., he became a member of the ASTM Staff in 1920.

NFPA Releases Proposed Electrical Code Changes

PROPOSED CHANGES for the 1953 National Electrical Code have just been released in Boston by the National Fire Protection Association, sponsors of the Code. Published in NFPA Pamphlet No. 70-PRI, the changes, proposals not recommended and items remaining on the dockets of the various

"Code Making Panels" are detailed and circulated for public comment. A deadline date of December 1, 1952, has been established for all comments.

Some of the significant proposed changes and additions follow. Electrical receptacles will henceforth be required to be designed so that they cannot be used interchangeably in different circuits of different voltage, frequency or types of current (AC or DC). New rules are proposed to safeguard users of portable equipment and electric clothes driers by more effective grounding means. Liberalization of the use of armored cable in the air voids of cinder block walls is suggested except where subject to excessive moisture.

An entirely new article is submitted on mineral insulated-metal sheathed cable proposing its use for services, feeders and branch circuits in both exposed and concealed work, in dry or wet locations, under plaster or embedded in plaster, brick or other masonry. Necessary changes in the balance of the Code to incorporate this type cable are also detailed. Proposed revisions in the use of new types of non-metallic sheathed cable are specified with comments by Panel members on the feasibility of the changes.

A revised set of markings for flexible cords and fixture wire is prepared to eliminate obsolete and include new types, affecting particularly heat-resistant, rubber-covered fixture wire, latex-rubber insulated wires, tinsel cords, heater cords, and range cables. Provisions are proposed to prevent the installation of fixtures and outlet boxes in contact with conducting surfaces of conductive thermal insulation. Gas piping is to be deleted as a method of grounding electrical circuits.

The NFPA Code Making Panel dealing with electrical appliances recommends that it be made mandatory for flatirons to be equipped with temperature limiting devices, which action will undoubtedly go far to eliminate fires caused by accidental overheating of such appliances, responsible for many fires in years gone by. Most manufacturers have already incorpo-

DO YOUR FIRE EXTINGUISHERS COMPLY WITH THE

NEW ICC REGULATION?

...at least 1½ quarts of
extinguishing capacity
per vehicle

(MANDATORY DECEMBER 31, 1952)



1½ qt., 1 qt. pump type
with vehicle bracket.

Pyrene offers you
low initial cost
extra long life

The most practical way for you to comply with the new ICC regulation is to equip your vehicles with vaporizing liquid extinguishers. They give the best all-around protection and they're less expensive than other types. In the long run Pyrene* heavy vehicle extinguishers cost less than any other vaporizing liquid extinguisher listed by Underwriters Laboratories, Inc. This is because only Pyrene makes special type extinguishers to withstand unusual shock and constant vibration. Competitive vibration tests prove conclusively that Pyrene units last *at least twice as long* as other vaporizing liquid extinguishers—and their initial cost is no higher than that of many other brands. Twice the life means half the cost. Buy on facts... buy Pyrenes. Double action liquid pump. 25-30 foot range. Easily recharged immediately.

WANT PRESSURE OPERATION?

Now is the ideal time to adopt larger, more efficient 2 qt. and 1 gal. stored pressure Pyrenes. Sight glass shows liquid level. Gauge reveals air pressure.

*U.S. Pat. Reg. U.S. Pat. Off.

VAPORIZING LIQUID HAS IMPORTANT ADVANTAGES OVER OTHER TYPES FOR VEHICLE PROTECTION

Carburetor, Fuel Line and Tank Fires—Vaporizing liquid provides a much longer discharge stream, making it possible to reach the source of the fire over the spill fire on the ground—from a safe distance.

Electrical Wiring Fires—Vaporizing liquid is a waterless, nonconducting, nondamaging fluid. It penetrates hard-to-get-at areas better than other extinguishing agents and provides smothering and cooling actions.

Tire Fires—If water is not available, vaporizing liquid is the next best bet. It has smothering action and greater cooling action than other chemical extinguishing agents. It can also be concentrated in a stream on underbody parts to which the fire has spread.

Brake Fires—Vaporizing liquid provides the smothering and cooling actions required here, too. Because of its long delivery pressure, it can be directed easily onto drive shaft fires.

Cargo Fires—Vaporizing liquid—a nondamaging fluid—is more penetrating than all other extinguishing agents, including water. For incipient fires in general cargo, this is important. Long range and effectiveness on flammable fluids make larger, pressure-operated units ideal for tank trucks, too.

HAVE YOUR JOBBER SUPPLY YOU TODAY!



Pyrene
FIRE EXTINGUISHERS

PYRENE MANUFACTURING COMPANY

583 Belmont Avenue

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rated this safeguard on irons. Temperature limiting means are also to be made mandatory for water heaters, the absence of which is noted as having caused several fires.

A special subcommittee is submitting to the NFPA and the public a proposed new section on fixed electrical space heating equipment in recognition of the growing use of such means of home heating. Another appliance receiving attention is refrigerator motors which the 1953 Code will require to have adequate ventilation to prevent overheating.

Significant changes are proposed for the section of the Code dealing with "hazardous locations." Recognition has been given to positive pressure ventilation arrangements to reduce the area considered hazardous when ventilation is safeguarded by duplication of equipment or interlocked with the electrical supply. Definitions of hazardous atmosphere are more closely defined to aid in applying the rules.

To avoid undue restrictions on certain equipment in "Class 1, Division 2" locations such as fixed lighting, instruments and resistors, there is a proposal that where temperature limitation, based on 80 per cent of the accepted ignition temperature of the flammable gas or vapor involved could be secured, general purpose type instead of explosion-proof enclosures might be used. Specific temperature limitations are suggested for surface temperatures of electrical equipment in atmospheres involving Class II or III dust explosion hazards, that is, atmospheres laden with combustible dusts, fibers or flyings.

Perhaps the most sweeping changes of all are in Article 510 where complete new rules are proposed for commercial garages, residential garages, aircraft hangars, gasoline service stations, bulk plants storing flammable liquids, paint, lacquer and similar finishing process areas, and where combustible anesthetics are used.

Other complete revisions affect Motion Picture Studios, Article 530, and elevators, Article 620. The latter article also is broadened to take care of dumbwaiters and moving stairways (escala-

tors). A completely new Article 680 is proposed to cover hermetic sealed refrigerating machines.

A general revision of Article 710, applying to circuits and equipment operating at more than 600 volts between conductors, is also proposed, this particular section needing clarification to indicate clearly its intent. Article 725 is broadened to include low voltage circuits not used for signal or remote control circuits.

Copies of the pamphlet are available by addressing NFPA Publication Service, 60 Battery-march Street, Boston 10, Mass. The cost is \$2.00 per copy,

Progress with Color

—From page 29

does not always mean more light. Lighting and color specialists work for glareless lighting and clear but restful contrasts.

Good reflecting colors usually give greatest worker efficiency and lowest light bills. White has a reflection value of 88 per cent, cream 69 per cent, ivory 67 per cent, sky blue 65 per cent, pale green 59 per cent, buff 52 per cent, grey, of the type used in many old-fashioned factories only 50 per cent. With the exception of yellowish, colors will not reflect efficiently if too far removed from white. On the other hand, white soils easily, often lacks eye appeal, or creates excessive contrast.

To avoid eye-fatigue, colors directly in line with the workers' eyes should be about the same brightness as the bench-top or of other working area. Soft shades such as light grey, pale green, and light blue are restful, line-of-vision colors; light grey being especially practical as a dust-concealer.

In modern buildings and plants, ceilings reflect the greatest volume of light. The Illuminating Engineering Society reports that in one large office-building a change from light buff to white ceilings (where white is effective) and the addition of cream-colored walls would have cut lighting costs about \$14,000 per year. Very high walls may also be painted white for added reflection. Very low ceilings can be raised visually by the use of a receding sky blue.

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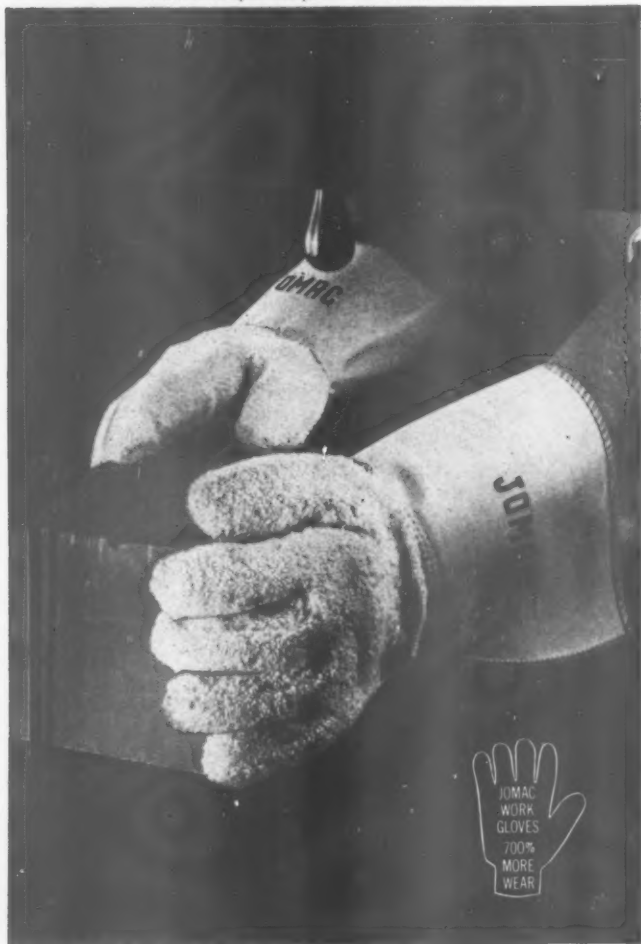
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bookkeeper a dark desk-top means eyestrain through over-contrast with white paper. Light gray desk-tops are more restful. On adding machines, appropriately contrasting colored keyboards improve legibility. Inaccuracies decrease. The situation could be further helped by a floor having a reflection factor of at least 25 per cent. A stocking factory changed dark-work surfaces to light blue, saving eyes of girls at work on dark-colored stockings and cutting down rejects.

Distinctive colors pick out moving parts of machinery, center attention on them. Neutral backgrounds eliminate distraction from the field of vision. Again, better vision, more accuracy, less eyestrain, fewer accidents.

In one Brockton, Mass., plant, shoemakers worked at black machines, using black thread, stitching black shoes. Wall colors were equally gloomy. Light green, blue, orange, and cream brought more light to the work and its surroundings. Light-reflecting paint freshened and cleaned up workroom walls.

Particular attention was given to background and to attention-color, like orange for moving parts. Workers reported less eyestrain, relief from nervous fatigue. Absences declined. Best of all, the accident rate fell off sharply.

Anyone who has tried to thread a needle will appreciate why hosiery mill workers looping thread over a series of fine needles are distracted by strong light contrasts and by movement of neighboring workers. Grey-blue panels around the tables shut out confusion and provided a needed neutral background.

A small pale-gray mask behind a riveting machine, pin-pointing the operator's attention and cutting out visual distraction can save many fingers from damage due to faulty distance estimation.

The spatial behavior of color makes camouflage possible. "Reverse camouflage" makes desired objects easier to see. Bands of "safety yellow" along the sides of aisles stop workers from drifting into dangerous traffic zones. Black and yellow striping warns of obstacles on floors, or overhead.

Again, spatially used, the appropriate green applied to walls in cramped spaces "moves them back" visually. This particular factor, obviously has many applications to airliner cabins, cockpits, cabs of engines and other situations where a sense of space and air contributes to comfort and relaxation.

The ideas we have been discussing are not separable. When we shoot for one, we usually get the others. Good visibility, efficient lighting, colors which do not strain the eyes, spatial color, functionally used—all these add up to harmony and beauty. Higher morale means better work, and conversely, what helps a man to do better work usually raises his morale. One thing is certain, dollars spent in improving color and lighting always mean greater safety and efficiency, always pay off in less waste and large output.

The most important fact about modern transportation is that it moves much faster than it used to, and that, in times to come, we can expect it to move faster still. What moves faster hits harder. A crumpled fender at fifteen miles per hour means a crumpled vehicle at sixty-five or seventy. Split-second decisions depend on seeing clearly and interpreting correctly in every situation. On the ground or in the air "unintentional camouflage" is deadly.

Color treatments, readily distinguishable at the greatest distance and in various lights are the most desirable. Field tests of color vision show that orange is the most effective color, followed in order of decreasing effectiveness by yellow, green, red, and blue. Oranges and yellows as well as luminous white and aluminum are the most suitable for front and rear of commercial vehicles. Red and green are seen as shades of gray by about two per cent of the population. Red has the further disadvantage of appearing progressively blacker under progressively dimming light. Light-dark contrast heightens visibility and focuses attention.

The illumination under which the color is to function is also important. Yellowish red (orange) is most visible in daylight. White

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and aluminum show up best at night under the usual headlamps, as do most metallic-type finishes, which act as semi-reflectors.

Choice of color depends on background quite as much as on qualities of the colors themselves. The green and yellow color scheme on Diesel locomotives of a Pacific Coast Railroad was lost completely in California foliage. Silver and black, the next choice, would not show up against Nevada desert. Black and orange finally removed the hazard.

The field gray, which Long Island Railroad employees had found refreshingly new and different from old conventional "train" color, proved too perfect a match for the Long Island terrain, especially in time of low-lying mist, or at dusk. To warn motorists at grade crossings and to preclude other accidents, locomotive headlights were kept on through the day. My suggestion that orange be added to the front end of the locomotive increased visibility.

A similar problem, presented by the New Jersey Central Railroad, was solved by an orange and blue color-scheme. These two colors, used together, enhance each other, reinforcing their visual impact and making for higher long-range visibility.

In water transportation, vacillations of weather, and constantly shifting colors on the surface of the water complicate the choice of color. Modern color engineering, in coping with these difficulties, also significantly improves ship-board morale.

In 1951, I restyled color plans for the Baltimore and Ohio Railroad's tugboats which ply the crowded harbors of New York and Baltimore. Their low-visibility black and maroon were changed to a high-visibility combination of orange and brown. For Jersey Central's tugs, high-visibility greens replaced the old style olive drab. Colors like gray-green and dark blue unrelieved by contrasting color are just as unwise for ships as for motor transport. Many of our contemporaries seem to have forgotten the fact that Julius Caesar used blue paint on the rigging of his triremes because he

wanted to hide them.

Last year, I was called upon to select colors for the ferry boats of a commuter railroad. In tackling this problem, I sought to achieve maximum visibility and to minimize the squat appearance of the vessels.

We have talked about how color works to expand or contrast a workroom. It can perform similar spatial tricks with the apparent proportions of a vessel. The proposed color scheme here involved colors getting progressively lighter from waterline to funnel. Red, two shades of green, and white were used. The combination achieved both of the goals which had been set. Our railroad clients soon reported the added bonus of heightened morale among crew members, and an increase in the advertising value of their marine equipment. Soon we shall be putting to work for the United States Navy principles of color engineering which will make cramped quarters a better place for crews to live.

Lighting, too, poses a safety and efficiency problem in the submarine. The color quality of the light source can change the apparent color of the surroundings. The fluorescent type of fixture also has the effect of constricting the pupil of the eye, thus handicapping vision in close-up work. For example, in one commuter railroad, newly-conditioned coaches which set a high standard for lighting intensity caused as many complaints as hosannahs, because it gave passengers a dazzled condition known as "cotton in the eyes."

The Swedish Navy conducted an interesting post-war experiment to prevent "night blindness," introducing a tempered brown-light emergency system in addition to the ordinary white light. For the illumination of chart cases and navigation instruments, brown lamps were used, each with a rheostat by which the intensity of light could be adjusted. Thus navigation officers and other members of the deck staff, coming out into the deck from the bright indoor light, would be spared the usual half-hour period it takes for optical adjustment to the condi-

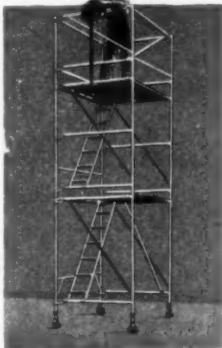
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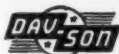


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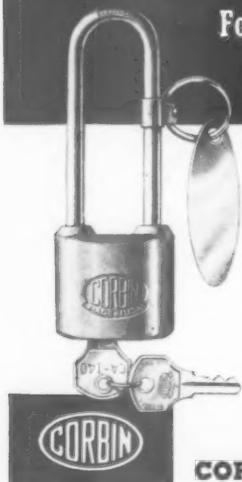
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tions of night vision. During the course of the Swedish Navy's experiments, red and blue light were tried and discarded for this purpose, because they caused color confusion; the neutral brown tint, similar to bottle glass, was a preferred solution.

On land again, safety demands that busses and automobiles be visible against a variety of backgrounds and under varying conditions of light. Some years ago, the National Safety Council and education officials chose light chrome yellow as standard for school busses. This yellow is highly visible in daylight and under headlights at night. Dim illumination does not turn it black. It contrasts strongly with highway white or black and with the blue of the sky. The exact shade of yellow has been specified in the *Manual on Uniform Traffic Control Services for Streets and Highways* published by the American Association of State Highway Officials, Washington, D. C.

Such standardization also fulfills another criteria — instant recognition. It would soon come to be associated with school busses in the motorist's mind, and would make him extra careful. This yellow is especially effective against backgrounds of snow in winter and the greens of spring and summer.

Legislation has not, unfortunately, followed suit in most cases. A study by the Massachusetts Registry of Motor Vehicles shows rear-end collisions to be the most prevalent type of highway accident, yet no state law anywhere demands that fronts or rears of busses or trucks be painted in conspicuous colors. (Black, yellow, or white chevron stripes, with horizontal stripes for contrast would be effective.)

New Jersey studies show that six out of ten motor victims meet death after dark. In New York, three-fourths of all pedestrian fatalities occur in darkness. It is four times as hazardous to cross a street at night, although there is only one-third as much traffic. The average automobile, carrying 30 mile-an-hour lights whizzes along at 50 or more on America's 113,450 miles of improved but

unlighted highways. Commercial vehicles and private ones alike avoid the very colors we have shown to be the safest because less visible combinations show less dirt. (Actually, results prove that whenever color engineering steps in, so does employee interest in keeping vehicles clean, and even the private owner takes greater pride in his car's appearance.)

More important than actual brightness of highway illumination is light which reaches the surface of the road and which picks out objects clearly. Mere intensity which causes glare can be a real hazard.

In England, the Ministry of Transport has tried coloring highways themselves. Tests in the Channel Isles show that marigold concrete cuts down sun and headlight glare by 40 per cent. Red, green, blue, and yellow asphalt have also been tried. All colors used had positive effects in reducing mishaps, and in making pedestrians more visible at night.

Colored roads correlated with maps may some day eliminate the need for route markers, and help keep driver attention on the road ahead. Best of all, adding color to concrete costs very little, and pigments which do not fade objectionably are now available.

Massachusetts safeguards drivers on some roads by making the center lane of three darker than the two outside ones. This technique is more effective visually and psychologically than the use of lines. Rough texture on the center lane makes tires hum, reminds the motorist to use it only for passing. Where curves make passing dangerous, middle lane vanishes altogether, and the remaining two lanes are divided by a wide white line which clearly says, "don't cross."

Especially effective against dark pavements, a yellow-dividing-line has the further advantage of showing up against partially cleared snow.

New problems confront the color engineer when he takes to the air. Blue sky, white clouds, fog, mist, heightened reflections from purer light in the upper atmosphere all present their own difficulties. To our overloaded airports and hard-

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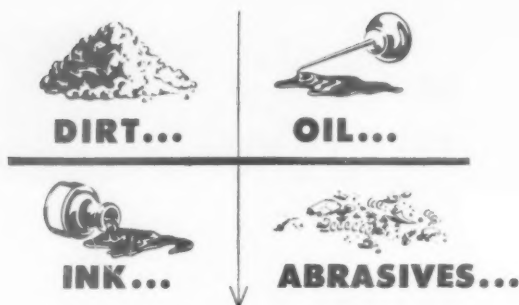
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worked pilots and crews, the future promises even greater increases in air travel. It is imperative that we bring to the problem of air safety all the ingenuity and energy at our command. Correct color helps pilots spot other planes quickly, in the air, or on runways where collision might otherwise result. Color also helps rescuers locate disabled craft forced down on land or at sea.

Studies made on the use of color in aviation have already produced important conclusions. A total of 26,784 observations of paint schemes on aircraft revealed that glossy sea-blue paint applied to the trailing halves of empennage and wing surfaces improved the visibility of aluminum models more than any other scheme considered. Among other combinations tried were an all-white plane, all orange-yellow, black on white, glossy sea-blue on aluminum, glossy sea-blue on orange, orange-yellow on aluminum.

A recent National Research Council of Canada report shows that the failure of orange-yellow is due to its yellow content. The Canadian Council found that, in the air, yellow was very bad for recognition at a distance, but that orange of a slightly reddish quality was excellent.

On planes which operate in high-temperature parts of the world, an exterior coat of white paint contributes markedly to passenger comfort and to crew efficiency and morale. In tests, painted aluminum exposed to the sun's rays remained 28 degrees F. cooler than the same surface unpainted. In a DC 6 airplane this would mean cabin temperatures 15 degrees cooler. At Mexico City, in the spring, a painted and unpainted plane were exposed to maximum solar radiation for one hour. The cabin of the unpainted plane was 10 degrees hotter. Skin temperature of the unpainted plane was 34 to 35.4 degrees hotter.

The fact that color reflects heat as well as light has an important application to airport runways. Brilliant white runways reflect hot updrafts when surrounded by heat-absorbing low value grass-green areas. Local air-disturbances of this kind cause considerable land-

ing hazard. Runways and rooftops which reflect the same amount of heat and light as the grass or other surrounding cover cut down "bumpy air" around and over landing fields. Colorwise, this means we want as little light-dark contrast as possible. Fortunately, we can use certain reds, browns, or greys which have the same light-dark value as grass green, but which can still be seen by the pilot against the green background.

In the cockpit of an airplane it is highly desirable to have color and lighting that will assist the pilot and crew to adjust the eye to the conditions created by light inside and outside the plane. For instance, at night a black interior is desirable, so that the lighting conditions match those outside, and do not call for adjustment of the eye muscle as vision is shifted from interior to exterior. But the black cockpit would offer too much of a contrast to outside seeing conditions during the daytime. One compromise is to use a grey wall and ceiling, and maroon flooring, both of which darken under red lighting inside. Dials are yellow, for contrast to provide legibility.

Red floodlighting of the cockpit interior is satisfactory from this standpoint of limiting contrast of visual brightness inside and outside the plane, except during electrical storms. Then, as the lightning flashes through the cockpit windows, the pilot would suffer less from lighting contrast if the plane interior were floodlighted in white.

The qualified color engineer who works in industry and transportation has also much to add to safety in the home and efficiency and progress in education. A good deal that already has been said on the use of color can be readily applied to these areas of our daily life. A poorly lighted room with a bad exposure can be made more cheerful by painting it in colors which provide harmony and increase light reflection. There will be fewer bumps, bruises, and falls when "twilight zones" are properly colored and lighted.

A flight of stairs can be made safer by painting it with colors

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NON-TOXIC SKIN CREAM

acts in 3 ways at once -

PROTECTION ✓
PREVENTION ✓
ALLEVIATION ✓



Used successfully for a number of years in all types of industries for skin protection of workers.

PROTECTION against irritating and drying materials.

ASTERMA'S lubricating action is effective in the removal of inks, paints, dyes, dirt, grime, grease, oils, aids in preventing skin disorders by keeping skin clean and soft.

In constant use in Industrial Hospitals for a number of years for First Aid, all types of burns, cuts, bruises, etc. Recommended and prescribed by Physicians and Skin Specialists.

Some choice territories open for distributors.
Information and samples to industries upon request.

ASTRA Laboratory, Inc., Scotia, New York

SPEED UP GRINDING OPERATIONS WITH SUPERIOR SAFETY FLOOR REST

Designed to increase safety and grinding production, the Superior Safety Floor Rest mounted on floor grinders can handle various types of metal castings.



Workman using Safety Floor Rest



Anthony Pizzino
Inventor of Safety Floor Rest

Safety features of the Rest are --

Protection of operator against exploding or broken wheel.

Keeps hands free from wheel contact.

Operator stands out of range of grinding dust and sparks.

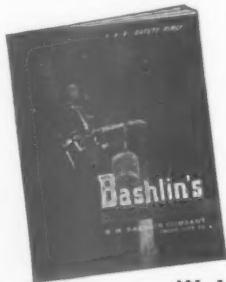
Pressure bar has a safety stop which permits bar to slide in the frame and prevents it from slipping out while pressure is being applied.

The Rest can be mounted on the left or right side of the wheel. The use of the Rest fulcrum and pressure bar reduces fatigue. Employees are more willing to work on stand grinding jobs where this type of equipment is used. All shapes and sizes of casting for stand grinding operations can be processed with Rest fulcrum procedure.

The pressure bar, being operated from the side of the Rest, the operator may apply as much pressure as needed. This requires little exertion or strain due to leverage gained by pressure bar.

For additional information write

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MASSILLON, OHIO**



Write Today for Your Copy

Bashlin's new bulletin giving full details on Linemen's Safety Equipment is ready for you . . . a complete line from which to chose, and every one a champion. Write today!

W. M. BASHLIN CO. Grove City 3, Pa.

which are not only in excellent taste but which reflect more light. Dark cellar stairs, a menace in almost every home, should be painted white with fluorescent or phosphorescent paint on the risers. Structural hazards like low door frames should be painted in colors which attract the eye of the unwary.

We all know that the American home is—statistically at least—one of the most dangerous of places. But the accident rate in the home can be substantially reduced when more architects, builders, decorators, and the average American man and woman become better informed about color engineering.

When children leave home for school, the color of their clothing is a factor in their safety. The United States Bureau of Home Economics advocates bright colored garments especially for children who use city streets. These bright outer garments will be highly visible to motorists when children are crossing or playing in the street. Winter clothes in bright colors are especially recommended, as vivid reds, blues, greens, and oranges are more striking to the eyes than brown, navy blues, greys, and maroons against a city background. And children prefer gay colors. Incidentally, adults could also give more thought to visibility of clothing, particularly if they walk on darkened roads at night.

In a truly modern community, a child will go dressed for safety to a school in which color engineering is a vital factor in his education. He will sit in schoolrooms whose colors facilitate sharp vision, stimulate mental alertness and encourage willingness to learn. Drab, dull, demoralizing tans and greys are being replaced by colors which eliminate glare, diffuse light properly, and exert a relaxing influence. Eye-strain, tension, and fatigue, three great enemies of education, are greatly diminished.

Carefully thought-out color engineering programs provide a psychological "change of pace" by providing variety in the color of schoolrooms. Thus at one New York City high school, the lunchroom has been painted peach (a

color found stimulating to the appetite) to contrast with the blue-green of the classrooms. In this same school, color engineering has been applied to the shop classes just as it was applied in industry to promote safety and efficiency.

Color has also made obsolete the old slate grey blackboard. This source of classroom eyestrain is being replaced by green boards, or as in one New York City school, with yellow boards and black chalk—an especially good combination since black on bright yellow affords maximum legibility.

These changes in the classroom will mean a future generation less plagued by defective vision. What price the nation now pays for eyestrain originating in the schools is shown by the fact that 12 per cent of the graduates of West-point and Annapolis are unable to take up their commissions because of defective vision developed during the years of intensive study in badly lighted, incorrectly colored rooms of the military and naval academies!

Oddly enough, many good ideas about color and its effect on morale and efficiency come to us from our more modern prisons, and certainly we should not allow our schools to lag behind.

In all the areas we have been discussing, color is used to mark fireplugs, first aid kits, emergency doors, etc. The effectiveness of markings depends not only upon visibility, but also upon standardization. Possibly red has become a danger signal for psychological reasons, but a red flag means danger today, because people all over the world have agreed to use it that way. Instant recognition is as important as high visibility. Once the color engineer has done his job, industry and the state would be well advised to reach an agreement on as many "signals" as possible.

Today, all over the nation—in production, in transportation, at home, and in the schools—color engineering has joined the fight against accidents and inefficiency. The color engineer's contribution grows continually, as its value becomes more widely recognized and its benefits more widely understood.

Important savings

in insurance costs,
sharp reduction of
crippling injuries,
safer and smoother
production, upswing
in employee morale



—and, of course, topflight handling
of claims! . . . Cooperation with their
Employers Mutuals Team has given
all these benefits to thousands of our
policyholder-owners.

*This teamwork can
help your business!*



The Employers Mutuals Team



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Employers Mutuals write: Workmen's Compensation-Public Liability-Automobile-Group Health and Accident-Burglary-Plate Glass-Fidelity Bonds-and other casualty insurance. Fire-Extended Coverage-Inland Marine-and allied lines. All policies are nonassessable.



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**"More than 98%
of our 27,000 employees
have enrolled in the
Payroll Savings Plan"**

JOHN E. GOBLE

President, National Tube Division,
U.S. Steel Corporation

"We of the National Tube Division of the United States Steel, recognize that systematic saving through the Payroll Deduction Plan is an investment in the security of the Nation, as well as of the individual. We are proud of the participation resulting from a person-to-person canvass in our plants and offices. More than 98% of our 27,000 employees have enrolled in the Payroll Savings Plan—a complete affirmation of their faith in America. Such personal savings are the backbone of our free enterprise system."

Concisely, clearly, Mr. Goble cites three of the reasons why 98% of the 27,000 employees of National Tube are enrolled in the Payroll Savings Plan:

- recognition by management that the Payroll Savings Plan contributes "to the security of the Nation as well as of the individual."
- the purchase of Defense Bonds through payroll deductions is concrete affirmation of Americans' faith in America.
- a person-to-person canvass in plants and offices put a Payroll Savings application in the hands of every National Tube employee.

There is still another reason for National Tube's outstanding employee participation: *Mr. Goble's personal interest in the Payroll Savings Plan, and the conducting of the person-to-person canvass.*

State Directors of the Treasury Department, mem-

bers of the Field Staff of the Payroll Savings Division, Volunteer Chairmen of industry groups—everyone associated with the Payroll Savings Plan—will tell you that every highly successful Payroll Plan is a reflection of the deep interest and personal effort of the company's top executive.

If you are the man who makes the top decisions in your company, ask today for a report of your Payroll Savings Plan, particularly, the percentage of participation. Then, call a meeting of your associates. Show them this statement of Mr. Goble's. Tell them you are going "all out" to put your company (large or small) in the front rank of those who can be justly proud of their Payroll Savings Plan.

A phone call, wire or letter to Savings Bond Division, U.S. Treasury Department, Suite 700, Washington Building, Washington, D.C., will bring prompt cooperation from your State Director.

If you are not the chief executive of your company, please tear out this page and send it to the "Big Boss" with your recommendation.

The U. S. Government does not pay for this advertising. The Treasury Department thanks, for their patriotic donation, the Advertising Council and

NATIONAL SAFETY COUNCIL





the fight for life





500,000

lives saved

Reductions in the annual accident death rates since 1913 — the year the national safety movement was formally organized — represent a saving of 500,000 human lives.

The National Safety Council is a nonprofit association devoted to the prevention of accidents of all kinds. It carries on a continuous national program of accident prevention and stimulates interest in safety in all fields through cooperation with other organizations.

Forty Years



of United Attack

It was 40 years ago that a group of safety pioneers met in the Hotel Pfister in Milwaukee to hold the First Cooperative Safety Congress.

Out of their discussions and their determination to wage united war on accidents came the National Safety Council, organized and operating within the following year, and what we now know as the safety movement.

How have we done in those 40 years? Are we winning the war on accidents, or is it at best a stalemate?

I sincerely believe we are winning. Why? First, because we know so much more about how to prevent accidents than we used to. Second, because the public is much more safety-conscious now than ever before. Third, and most important, *because never before in all the history of safety have so many people pooled their efforts in a coordinated and united fight on accidents.*

Statisticians tell us that in the last 40 years 500,000 lives have been saved through this united effort. They base this estimate on reductions in the annual death rate since 1913.

This is encouraging news. But I firmly believe that in another 10 years we can and will make much faster progress than this.

We surely will if the cooperation that is now so evident in the safety movement continues and increases as it should.

Forty years are behind us. Our progress — in the last year alone — is clearly evident in this report. We are winning the fight. Through coordinated effort, let's really turn on the heat in the next 10 years!

Ned H. Dearborn

President

The Accident Problem



94,000 DEATHS



9,400,000 INJURIES



\$7,900,000,000 LOSS

■ ACCIDENTS ARE: the leading cause of LOST WORKING YEARS OF LIFE

■ ACCIDENTS ARE: the 4th cause of ALL DEATHS

■ ACCIDENTS are a serious threat

... to people of all ages

Under 5
Years



8,200
KILLED

5 to 14
Years



5,900
KILLED

15 to 24
Years



12,700
KILLED

25 to 44
Years



22,200
KILLED

45 to 64
Years



19,700
KILLED

65 Years
and over



25,300
KILLED

... in all of their roles or pursuits



The Plan of Attack

"The Council, through its component conferences, sections and committees and its full time staff, undertakes to:



"Discover the facts of accident occurrence, cause and prevention, by collecting and studying accident records, and through research.



"Devise or help devise engineering, educational and enforcement measures for accident prevention.



"Assist in determination of engineering requirements for the safe design, construction and use of machines and equipment.



"Help formulate model safety legislation and in this connection provide, on request, technical information and advice.



"Participate in planning and executing training and educational programs; produce needed education and promotional materials.



"Disseminate all this information widely to interested groups and to the general public, to arouse them to the need and acquaint them with the methods of accident prevention.



"Encourage and assist the establishment and functioning of community and state safety organizations.



"Cooperate with other agencies in fire prevention and in the prevention of occupational disease."*

* From *SAFETY IN ACTION*, the official statement of policy prepared by the Board of Directors of the National Safety Council.

The Organization

The National Safety Council is a council in the true sense of the word — a cooperative association of groups and individuals working together for the conduct of safety activ-

ities, both separately and jointly. It is American in concept and its strength lies in the voluntary participation of all who are in a position to promote safety.



The Attack

Since the acts and conditions which cause accidents are as varied as all human activity itself, the prevention programs must be equally diversified to reach every person in each of his many roles — worker, driver, pedestrian, homemaker, student, player, traveler.

The organizations interested in safety pursue every avenue of attack — the regulatory work of government, the control of owner-

ship exercised by industrial and transportation companies, the persuasion and education which are the avenues open to all organizations.

Each of the Conferences of the Council is continuously examining program activities in its field, improving programs and filling gaps. The progress of the Conferences is reported on the following pages.

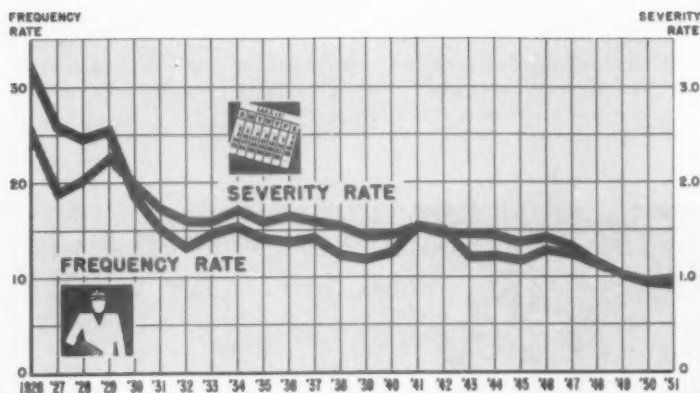


Progress in



Industrial Safety

Injury experience of reporters to the National Safety Council 1926 to 1951



The frequency rate for National Safety Council reporting members (all industries) reached a new low in 1951:

- 3% lower than the previous year
- 22% lower than the previous 5-year average
- 38% lower than the 1941-1945 average

The severity rate rose from .94 in 1950 to .97. The 1951 rate was:

- 13% lower than the previous 5-year average
- 25% lower than the 1941-1945 average

Occupational accidents for all industries (both Council members and nonmembers) increased about 8% in 1951, partly due to a 3% increase in exposure.

The accident rates of nonmember industrial plants continue to average 70% higher than the rates of Council members.



Associations and Small Businesses

Mr. Dearborn, in his address to the President's Conference on Industrial Safety, stressed the need for working closely with associations in order to reach thousands of small businesses which have no organized safety programs. More than two-thirds of all industrial injuries occur in businesses

with fewer than 100 workers. The creation of interest in safety through associations was accelerated by the use of a grant received from the National Association of Mutual Casualty Companies. During the year the director of this program spoke on behalf of the safety movement at many local confer-

ences and association meetings throughout the country.

The Council's promotional and technical materials for small companies have been completely revised, and a special association news letter is being sent, without charge, to interested associations.

One result of these efforts, in addition to increased association safety activity, has been the extension of the Council's group service membership plan to several more industries. One such group membership includes 96 small plants. The grant of funds to continue this program has been extended for the coming year.

New Publications

The Industrial Department undertook the production of two new specialized safety manuals during the year, one in collaboration with the Education Council of the Graphic Arts Associations, the other with the American Hospital Association.

In the past year the department wrote and produced:

- Employee training booklets at an average rate of one per month
- A brochure on off-the-job safety
- 24 new Safety Instruction Cards
- 35 Data Sheets and other publications of a technical nature
- A third volume of Five-Minute Safety Talks for Foremen
- Three new Safetygraphs
- A new type of job procedure leaflet, the Fotogram, on an experimental basis
- Four new safety films, (in both 35mm sound slide and 16mm motion,) two of them in color

Training

The Committee on Engineering Education of the Industrial Conference has been made the Committee on Industrial Training and given responsibility for the Council's Safety Institute.

Six sessions of the Institute basic course and one advanced course were held at Council headquarters during the year. A total of 167 students were enrolled.

The Industrial Department arranged a 3-day session on safety training for the Tenth Annual Conference on training in business and industry at Purdue University.

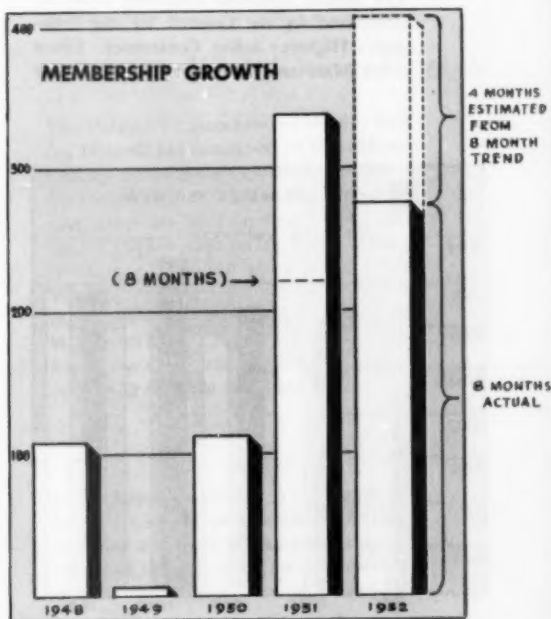
Department Organization & Services

In the past year the Industrial Department improved the balance between editorial and engineering staff. This change has improved both the engineering advisory services to members and the quality and quantity of publications.

Approximately 4,500 requests for technical and program information were answered for industrial members, insurance companies, government agencies and others.

Growth

In the past two years net increases in occupational types of memberships have been outstanding.

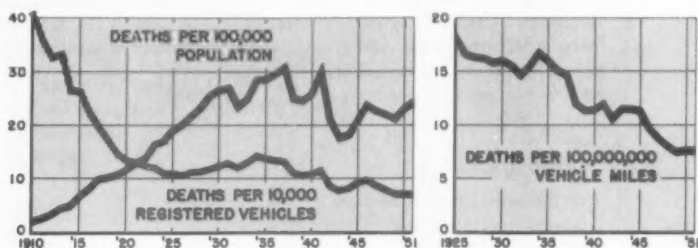


Progress in



Traffic Safety

A substantial increase in motor vehicle use during 1951 brought about a 7% increase in traffic deaths for 1951 over 1950. The mileage death rate, however, remained almost constant at 7.6, only slightly above the all-time low of 7.5 recorded in 1949, 37% below the 1941 rate.

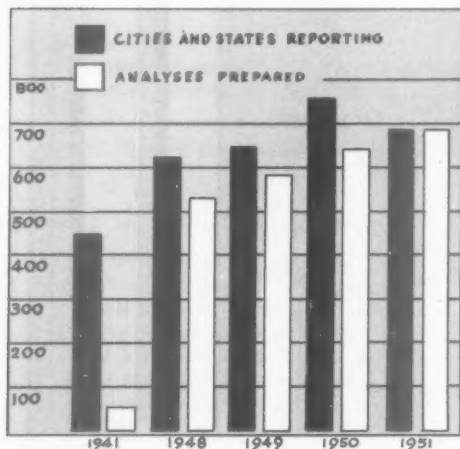


Annual Inventory of Traffic Safety Activities

The annual inventory continues to be administered by the Council for the President's Highway Safety Conference. Fewer cities submitted reports in 1952, but more

analyses will be prepared and presented this year than last. Every reporting city and state should receive such an analysis of their activities this year.

Inventory Analysis Program
Wisconsin Cities (32) Over 10,000 Population
(Total Fatalities and Program Trends)





Awards were made again to cities and states in the National Traffic Safety Contest, based on Inventory reports. Grand Award winner among cities was Shaker Heights, Ohio, and among states, Colorado.

Operation Safety

The use of *Operation Safety* materials in building traffic safety education programs increased by more than 17% in the past year. Most evident was the growing participation in traffic safety activities by the Armed Forces, by official state agencies, and by business concerns as a part of their community service and off-the-job safety efforts. A monthly average of 1875 *Operation Safety Kits* are being distributed.

Signs of Life

This continuing educational program for observance of highway signs and signals is placing special emphasis on highway-rail intersections. A series of transcribed interviews with the nations' leading racing drivers is currently being used by more than 1000 radio stations. News features are furnished regularly to all daily newspapers and to a number of weeklies. Many traffic officials include recognition of basic traffic signs by shape and color alone in driver's license examination. Safety councils and other groups are using hundreds of thousands of leaflets, posters, comic books and other promotional materials to present the program to drivers across the nation.

Accidents Records

With the assistance and financial aid of stock insurance companies, the past year has seen much greater emphasis placed on the importance of good accident records. Special attention was given to accident records by all committees of the 1952 Presi-

dent's Highway Safety Conference, the Committee on Accident Records holding a workshop on the subject, resulting in recommendations of major importance for improving the quantity and quality of accident information.

Tests for Intoxication

During the past year the number of cities using chemical tests to determine the degree of intoxication of suspected drinking drivers has increased 45 per cent. Chemical test evidence was admitted by the courts of 42 states, although only 14 states have statutory provisions on the subject.

With the financial assistance of Licensed Beverage Industries, the Council's program in this field has expanded during the year. Training by Northwestern University Traffic Institute, made possible by a grant from the Council, has continued, and cooperative exhibits and activities with the American Medical Association have been expanded.

Winter Driving Hazards

The Council's Committee on Winter Driving Hazards has continued its research and educational program to combat the hazards inherent in winter driving. During the past year tests were conducted on a frozen lake surface to gain more information about the causes of jackknifing by combinations of vehicles. Although the basic funds for the committee's activities come from the Safe Winter Driving League, additional funds have come from other segments of industry concerned with the problem.

Growth

Traffic safety memberships increased 12% in 1951. Circulation of *PUBLIC SAFETY* magazine is now 12,159, with the paid subscriptions up 11% over last year.

Progress in



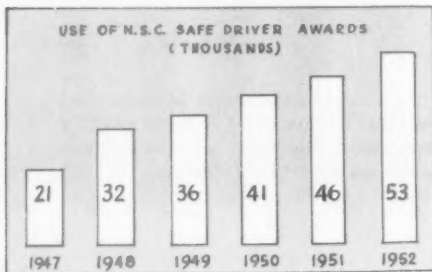
Motor Transportation Safety

Approximately 20 per cent of the nation's 55 million registered motor vehicles are buses, trucks, taxicabs and cars operated by professional drivers in commercial service. From the standpoint of both employee and public safety, this group occupies a place of major importance in the national traffic safety picture.

The National Safety Council has pioneered in the development of effective techniques for the training and safety supervision of professional drivers. These techniques have produced safe driving performance far superior to that of private motorists. The 2,007 fleets reporting to the National Safety Council for 1950-51 had an average rate of only 2.49 accidents per 100,000 vehicle miles — counting *all* accidents — whether they caused injury or the smallest amount of property damage, unless the vehicle was properly parked.

The 500,000th National Safety Council Safe Driver Award was presented in August, 1952.

The Council's Safe Driver Award Plan offers a practical yardstick for measuring individual and professional safe driving performance. Also, it has proven to be an exceptionally effective incentive due to its recognition as the nation's highest award for professional safe driving performance. A central records system, maintained at Council headquarters, insures the integrity of the award and provides a clearing house for the individual driving records of all drivers participating in the plan.



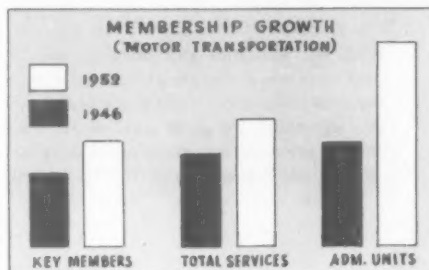
New Materials

Production of a series of five driver training movies will be completed by the year's end. Prints will be available in both color and black and white. Also produced during the year were:

- a new type of dash sticker series
- a Safe Driver Award shoulder patch
- a large banner for use at award presentation ceremonies
- a series of dispatcher memo pads carrying illustrated safety messages
- a version of the booklet "The You Factor in Accident Causes" for transit operators.
- a new training booklet for truck drivers.

Growth

The chart graphically illustrates the growth of the Motor Transportation Division. Companies which hold other types of membership — usually Industrial — but subscribe to the Complete Motor Transportation Service are considered members of the division for all purposes except key membership counts. The growth of Administrative Unit subscriptions indicates a general increase in the number of terminals or branches receiving all or part of the complete service.



Progress in

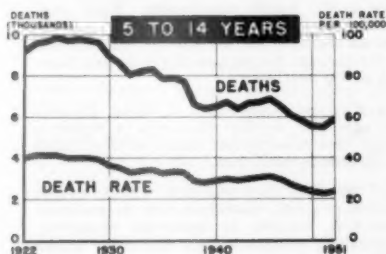


School & College Safety

Consultation Services

Statistically, 1951 was a bad year for the 5 to 14 year-olds. Accidental deaths numbered 5,900 — 7 per cent more than the previous year — the accidental death rate increasing 4 per cent. This is the first increase since 1945 and is cause for great concern.

For the 15 to 19 year group, there has been no important change in the number of deaths or rates for the past 30 years, increases in motor-vehicle deaths offsetting decreases in non-motor-vehicle deaths.



The School & College Conference has completed a survey of service programs of organizations and agencies interested in education and safety. The Conference will view the over-all picture of child accidents, urge the maintenance of present programs that are effective, stimulate the improvement of those areas where program inadequacies exist and propose cooperative effort to eliminate needless overlapping or duplication.

During the 1951-52 school year, 13,500 requests for safety education information were answered. Such requests numbered 13,000 in 1951, 11,800 in 1950 and 10,800 in 1949. Requests for technical assistance number around 6,000 annually.

School and College Division staff members spent 121 working days in 16 states to help plan programs and consult with school safety workers.

Section and Committee Activity

The three Sections and seven major committees through which the School and College Division's activities are conducted have successfully completed a host of needed projects in the past year.

A total of 65 school and college sessions and committee meetings were scheduled for the 40th Annual Safety Congress. Attendance at Congress sessions of school people interested in safety education has grown from 479 in 1941 to 2362 in 1951 — a fivefold increase in ten years.

Growth

Subscriptions to SAFETY EDUCATION, the only national magazine devoted exclusively to school safety, now total 7,655 as compared with 7,400 in 1951 — an increase of 6 per cent.

Distribution of other major publications was:

| | |
|-----------------------------------|-----------|
| Lesson Units | 1,134,576 |
| Posters | 333,000 |
| News letters | 51,750 |
| Safety Education Data Sheets..... | 69,769 |

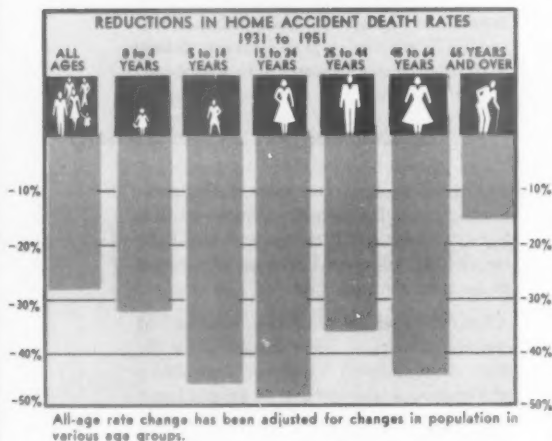
School memberships for the 1951-52 school year numbered 1,569 as compared with 1,341 for the previous year.

Progress in



Home Safety

Substantial and continuous reductions have been made in home accident deaths during the past two decades. Most of the reduction in the 5 to 14 age group and all of the reduction in the 65 years and over group has been made in the last ten years.



The Home Safety Conference has issued a new publication, **HOME SAFETY BLUEPRINT FOR COMMUNITY ACTION**, incorporating their three targets:

- 1—Safe home construction and equipment
- 2—Accident-alert families
- 3—Safety-wise communities

Under each of the targets is a group of related goals — pin-pointed by specific jobs with certain groups suggested to cooperate in their accomplishment.

The **BLUEPRINT**, in turn, forms a part of the new Home Safety Program Kit which contains what-to-do and how-to-do-it suggestions for a standard community program in home safety. The kit also contains sample program materials with advice on how to put them into effective use.

Cooperative Activity

Members of the Home Safety Conference have been working closely with a great number of organizations and associations interested in home safety. Several representatives are serving on a special committee for the prevention or control of hazards to children arising out of physical trauma or toxic substances. This committee has been appointed by the American Standards Association to draw up standards governing safety in design and materials for children's clothing, toys and furniture, harnesses and sleeping garments. The Council is also represented on the National Fire Protection Association committee on standards for flammability of clothing materials.

Steadily increasing interest in home safety has been demonstrated by the American Public Health Association and related regional and state public health associations. More local health departments are starting work in this field all the time, and 40 have become members of the Council for regular Home Safety Services in the past year.

The National Association of Home Builders has agreed to develop standards in residence design and construction aimed at elimination of dangerous conditions.

Staff members have consulted with numerous associations and manufacturers to assist in correcting hazards in household equipment, furnishings, children's toys, and other household objects.

Public Education

The success of the Council's Public Information Department in obtaining radio and television time and newspaper space devoted to home hazards has grown each year. Twenty-six home safety articles were carried in 15 national magazines with a combined circulation of 44 million copies in the last year.

Growth

Subscriptions to the Home Safety Service increased 158% during the last 12 months.

Progress in



Farm Safety

National Farm Safety Week

The ninth annual observance of this week was the most successful of any, and emphasized the steady progress the event has made in public acceptance and participation. For example, in the first observance of the week in 1944 there were 12 network radio broadcasts, 13 local broadcasts, and requests from 175 radio stations for transcribed messages. In 1952 the Public Information Department reported 33 radio network broadcasts devoted to the week, 153 local broadcasts, three TV broadcasts, and 496 requests for transcribed messages. In addition, farm magazine and daily newspaper coverage of the week, before and during the period, was the best ever.

Nearly 10,000 packets and 1,500,000 pieces of material were placed where needed by the 48 state chairmen, the Federal Extension Service, the Advertising Council, the state colleges of agriculture and other associations and groups. More than 50,000 posters and streamers were produced and distributed by the Farm Equipment Institute. Additional material was prepared by state committees and local groups.

By all measures — leadership, cooperation, material distributed, publicity obtained, and acceptance by rural people — this year Farm Safety Week again broke all previous records.

State Organization

Twenty-nine States now have State farm safety committees, and a number of others are being organized through Farm Division efforts. Twelve States employ full-time farm safety specialists, and four others plan to do so. The Farm Division again sponsored the annual Institute for Farm Safety Specialists, held this year at Ohio State University.



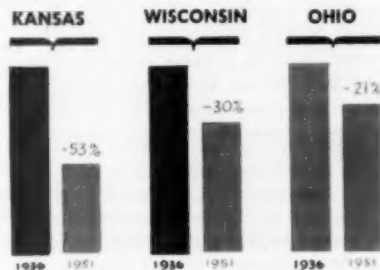
● committees

★ specialists

Materials

More than 1,000 prints of a new filmstrip on Corn Picker Accidents were distributed. A set of slides on common farm hazards has also been produced, as were six new Safe Farm Practices leaflets. Again, more than 10,000 Spring Clean-Up packets were provided to county extension agents and others. Farm Safety Review was received by 10,000 state extension workers and some 15,000 other leaders in agriculture. Much of this circulation was subsidized by business concerns and other interested organizations. The number of members receiving the new Farm Safety Service increased by 28 per cent in the past year.

The charts show how fatal farm accidents were reduced in three States having farm safety committees, State farm safety specialists, sound programs and good accident reporting systems.



progress in



Community & State Safety Organization



Substantial reductions in the toll taken by accidents can be achieved through sound organization for accident prevention at state and local levels. This is being demonstrated by the 84 chapters of the National Safety Council and by the 150 other local safety organizations now receiving membership services from the Council.

These safety councils provide the means by which all segments of society, including official agencies, are united for planned and coordinated action to prevent accidents. The work of the Field Organization Department is primarily that of helping communities and states to help themselves by means of effective safety organization and the application of tested accident prevention measures.

While local councils are autonomous, most of them were organized through National Safety Council stimulation, and the National is regarded as the parent organization. Neither can do its job without the other. Since each draws its strength from the same people and organizations, their aims and purposes are best served by a strong, coordinated national safety movement.

A major function of the Field Organization is the development of new chapters. Dur-

ing the past year promotional work was conducted in 25 cities and 10 states. Five additional community safety organizations were chartered during the year and enrolled as Class "A" Chapters.

Of equal importance is the servicing of existing chapters and member organizations. This includes consultation and assistance on organizational, administrative, financial and program problems; library services; phases of safety council operation, training new chapter managers.

Upgrading of existing safety organizations was undertaken in 22 cities and three states. Staff members participated in 36 state and regional safety conferences, filled more than 300 speaking engagements, and presented analyses of the Annual Inventory of Traffic Safety Activities in 38 cities.

Pensions will be provided for Chapter managers and other employees under a recently executed master trust agreement sponsored by the National Safety Council. The plan, developed by the Conference of Local Safety Organizations, will help strengthen the safety movement by making safety council administration more attractive as a lifetime career for competent personnel.



Chapters of the National Safety Council. State chapters are shown in white.



Women's Activities

The Women's Activities Division seeks to give tangible support to the Public Safety Divisions of the Council—Home, Farm, Traffic and School and College—by promoting their programs with women's organizations and Parent-Teacher Associations on local, state and national levels. Aid is also given to women's safety committees which are organized in state and community safety councils. It functions through the Vice-President for Women's Activities with the support of other women members of the Council's Board of Directors.

Two monthly leaflets on traffic safety and home safety, and a bi-monthly newsletter, especially prepared for women's organizations and Parent-Teacher Associations, are sent regularly to more than 4,000 women who are active in clubs, service groups and other organizations.

The Carol Lane Award, annual recognition for the most outstanding contribution to safety by a woman, was inaugurated in 1952. It is administered by the Council through a grant of The Shell Oil Company.

progress in



Public Information

Public acceptance of safety has increased tremendously in the last decade and is increasing at a continuously accelerated pace. More important, public participation in the safety movement has increased sharply and is expanding more and more rapidly.

We believe this is due in part to the increased activities of the Council and The Advertising Council in bringing the accident problem to public attention, and to the expanding safety consciousness of all forms of public information media.

Coverage of Safety by Public Information Media

10 YEAR COMPARISON

| | 1942 | 1952 |
|------------------------------------|---------|---------|
| NEWSPAPERS | | |
| Inches of space devoted to safety | 250,000 | 950,000 |
| News stories and editorials | 25,000 | 90,000 |
| Pictorial and cartoon mat features | 8,000 | 30,000 |
| Editorial cartoons | 150 | 750 |
| NATIONAL MAGAZINES | | |
| Safety features | 1 | 84 |
| RADIO | | |
| Network broadcasts | 29 | 282 |
| Local broadcasts | 7,500 | 52,800 |
| Transcribed programs and spots | 0 | 50,000 |
| Live spots | 8,000 | 102,000 |
| TELEVISION | | |
| Network broadcasts | 0 | 30 |
| Local programs | 0 | 92 |
| Film trailer spots | 0 | 1,400 |
| BUSINESS PAPERS | | |
| No. of papers using stories | 78 | 410 |
| NSC features used | 450 | 3,000 |
| Inches of space | 10,000 | 64,000 |
| EMPLOYEE PUBLICATIONS | | |
| No. of organs using stories | 380 | 1,800 |
| Stories, cartoons, etc., used | 7,500 | 37,500 |
| Inches of space used | 20,000 | 100,000 |

"Stop Accidents" Campaign

This is the seventh consecutive year of the "Stop Accidents" campaign conducted by The Advertising Council in cooperation with the National Safety Council.

A comparison of acceptance of the campaign in 1952 shows a 50% increase over the first year in the dollar value of advertising space and time.

| | 1946 | 1952 |
|--|--------------------|--------------------|
| Newspapers | | |
| Requests for safety ads | 11,244 | 57,529 |
| National Advertisers using safety advertisements | 35 | 38 |
| Employee publications | 0 | 350 |
| Car Cards | | |
| Transportation Adv. Industry | 70,000 | 98,602 |
| Outdoor posters | 17,000 | 16,500 |
| Window posters | 64,000 | 66,000 |
| Radio home impressions | 638,999,130 | 641,158,000 |
| Television home impressions | 0 | 201,142,000 |
| Value of space used by all media in "Stop Accidents" campaign | \$1,000,000 | \$1,544,589 |



Motion Picture and Radio Committee of NSC

Members of this committee, organized in 1947 and composed of more than 100 outstanding personalities in the entertainment field, continue to contribute their talent, time and services to safety in a variety of ways. In the past 12 months the following committee members have made recordings, appeared on safety radio and TV broadcasts, posed for pictures, made safety talks, and performed other safety services: Eddie Cantor, Gail Storm, Robert Young, Roy Rogers, Phil Harris, Bob Hope, Gregory Peck, Les Tremayne, James Melton, Lanny Ross, Jack Berch, Gloria De Haven, Del Sharbutt, Frank De Vol, Dave Gregory, Ace Ochs, Harry Van Zell, The Sportsmen. The following non-theatrical personalities also have contributed their services to the Council and to safety in 1952: News Commentators Douglas Edwards, Cedric Foster, Don Hollenbeck, Lowell Thomas, Pauline Frederick, Taylor Grant, Gabriel Heatter, Bill Henry, George Hicks and Clifton Utley; Indianapolis Motor Speedway Champions Jack McGrath, Johnny Parsons, Freddie Agabashian, Harry Hartz, Wilbur Shaw, Tony Bettenhausen, Walt Faulkner and Troy Ruttman (the 1952 champion).

Holiday Safety Campaigns

The amount of public attention to these campaigns conducted by the National Safety Council is increasing each year. Coverage of the Council's suggestions and warnings on holiday traffic has more than doubled in the last decade. The pre-holiday estimates of the holiday traffic toll receive more than four times the attention by newspapers and radio that they did when they first were made eight years ago. Estimates are made for the five major holidays — Christmas, New Year's, Memorial Day, Fourth of July and Labor Day.

Awards

The Council's Public Interest Award for exceptional service to safety in the calendar year of 1951 was conferred this year upon 135 public information media.

The Alfred P. Sloan Award for Highway Safety again was administered this year by the National Safety Council with the advisory support of the Automotive Safety Foundation. It was conferred upon seven recipients in the radio and television field.

The Council's Award of Merit went this year to 32 personalities who contributed exceptional services to safety in the public information field.

Magazines, Posters, Art

The nine national magazines produced by the Public Information Department's Editorial Division now have an average total monthly circulation of 925,000. The gross annual revenue to the Council from the magazines was \$647,000.

The department's Poster and Art divisions produced 325 new posters in the past year. Gross revenue from poster sales amounted to \$454,000 for 1951.

progress in



Council Services

Behind the scenes of the safety movement is a headquarters organization whose goal is ever better service to safety. The publishing, statistical, distribution and other chores

which make the Council effective are usually not glamorous, but are very necessary to the efficiency and usefulness of the Council's services.



Awards

A staff committee exhaustively investigated award techniques to aid committees of the Industrial Conference and the Board of Directors in preparation of an industrial award plan which has been first used in 1952 to judge 1951 records.

The plan recognizes a company's progress both in relation to its own past record and its industry's record. Also, both the frequency and severity of injuries are considered. All of this is done on a sound statistical foundation which largely rules out chance or "lucky" fluctuations in rates.

During the first eight months, with 7,150 industrial records analyzed, the following awards were granted:

| | PERFECT RECORDS | OTHERS |
|-----------------------------|-----------------|--------|
| Award of Honor | 36 | 202 |
| Award of Merit | 100 | 295 |
| Certificate of Commendation | 263 | — |
| President's Letter | 274 | — |

Acceptance and gratification for the new plan during this first year amply justify the efforts of the committees.

Exhibits

A new 20-foot exhibit of Council programs and services was constructed and displayed at five regional safety conferences. Smaller exhibits were sent to 24 other meetings of regional or trade groups.

Congress

Advance registration for the National Safety Congress and Exposition, attempted this year for the first time, saved time and trouble for thousands of delegates. Exhibit space was increased 50% and concentrated in one hotel to further enhance the usefulness of the Exposition.

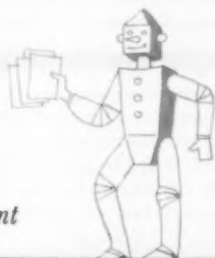
Safety Incentives

The Council inaugurated distribution of a wide variety of awards and incentives to further assist members in recognizing outstanding performances by groups and individuals.

Keeping Members Informed

Distribution of service announcements increased as the Council's membership grew. Approximately 1,440,000 directories, circulars and promotional enclosures were used in the past year. A newsletter was inaugurated to keep Federal Agencies informed of services added to the Federal Supply Schedule. Training of correspondents was intensified to further improve the handling

of service inquiries from members, as the number of inquiries reached an all-time high of 26,000 per year.

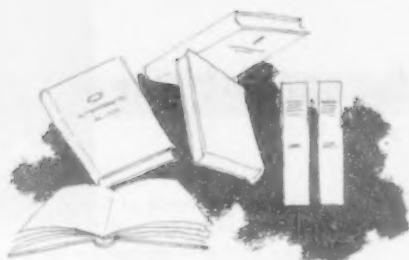


New Equipment

The addition of labor-saving equipment has increased productivity and offset, at least partially, the inflationary pressures on headquarters expense.

The conversion of membership records to mechanical tabulation has been virtually completed. The membership service review forms prepared from the punched cards, with their accompanying detailed lists of services, were even more useful to members than had been anticipated. In hundreds of cases members found, for the first time, a convenient means of showing their needs for added services. The unexpected financial result was increased circulations which will, in themselves, more than offset the expense of conversion to mechanical methods. The new method has also reduced errors in service arrangements for members. As further clerical tasks are mechanized the value of present equipment will increase even more.

Two new collating machines and a portable folding machine have greatly reduced assembly time for mimeographed publications. A high speed counting machine has increased accuracy and reduced the labor of counting small publications. A new vertical printing press, automatic addressing and duplicating machines have stepped up printing and distribution capacity.



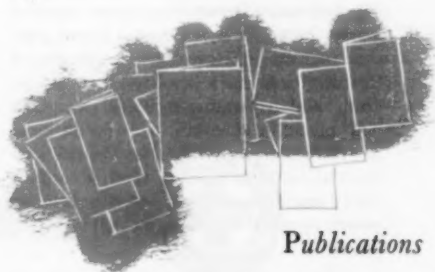
Library

The library has expanded its facilities to expedite its handling of more than 10,000 questions per year.



Films

Improved film rental service has been attained by placing complete Council film libraries in five regional offices of a commercial distributor. Revision of the National Directory of Safety Films is under way.



Publications

Circulations of Council periodicals climbed an average of 12% or 94,000 pieces monthly during the past year. The largest growth was a 23% increase in Jumbo Poster subscriptions.

The number of orders for safety supplies (other than periodicals and posters) jumped 25% to 36,700 per year. The volume of mail, express and freight from the Council office increased 16%, or 150,000 pounds.

Publications income during the first eight months of 1952 was up \$333,000—more than one-fifth—from the comparable period in 1951.

the outlook for



Future Progress



The Industrial Department of the National Safety Council was never in a better position to meet its immediate challenges. A full decade of work has been put into revising and expanding technical materials. The portfolio of educational publications has increased manifold. The Council's industrial facilities have, in brief, a running start toward an indefinite expansion of its power to serve the needs of American industry.



The need for better basic information on underlying causes of traffic accidents and improved techniques for dealing with those causes is apparent. Nevertheless, more intelligent and purposeful official action and public support at state and local levels in applying what is now known could bring about a 50 to 60 per cent reduction in traffic deaths. This is the area in which the

Traffic and Transportation Conference has made and will continue making its greatest contribution.



The Motor Transportation Division will devote increasing effort to extending Council membership to all types of commercial fleets. The new members thus obtained will give new strength to the jointly-conducted activities, and make possible the development of new and specific materials for supervisors and drivers.



In 187,000 school buildings located throughout the United States, there are 1,166,000 teachers and 32,000,000 children and youth who need the services of the National Safety Council and other organizations that can help. The School and College Conference pledges its continuing efforts to insure that the needed help is provided to all.



Most of the state and local services necessary for effective home safety programs are now available. The need is not for new services, but rather for better organization and coordination. Substantial progress in further reducing home accidents can be made in the future if organizations, business concerns, and community leaders will accept responsibility for a community-wide program. Continuous, constructive and consistent action is required which necessitates the coordinated and cooperative efforts of all citizens, all families, and all community leaders.



A permanent sponsoring group known as the National Committee for Farm Safety has been set up to help recruit support for this work. As the work of this committee

progresses, it will be possible to undertake several phases of farm safety that have been long delayed — programs with farm women, exhibits, demonstrations, films, surveys, research and testing, and others. Expansion of the work at an early date to include these needs is important to its continued effectiveness.



There are hundreds of communities where new safety councils could and should be organized and supported. The number of such communities is both appalling and encouraging — appalling because of the limited resources and consequent slow pace of current progress, encouraging because the needs are clearly defined and can be met by extending the scope of the Council's state and community safety work.



"The Safety Movement in America has proved itself. Hundreds of thousands of people are alive today who would have been killed in accidents had the accident rates in effect in 1919, when the national movement began, continued without reduction.

"Accidents remain a primary national problem. Great numbers of people in all walks of life are unaware of accident dangers and how to avoid them. There is a constant need for emphasis upon the responsibility of the individual in the observance of sound safety practices. New machines and new methods require continuous adaption of

safety programs to meet new conditions — to conquer new hazards, before they become acute.

"The Safety Movement depends upon voluntary action. It deserves and must obtain public acceptance and support on a much wider scale than ever before. The National Safety Council pledges all its resources and energies to the accomplishment of this objective and calls upon all those associated with it to go forward together in this crusade for safety."*

* Excerpt from SAFETY IN ACTION the Council's basic policy statement.

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1951-1952



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The public service part of the Council's work is financed partly by contributions and special grants sought under the auspices of the Council's trustees, and partly by the Council itself out of income from other sources.

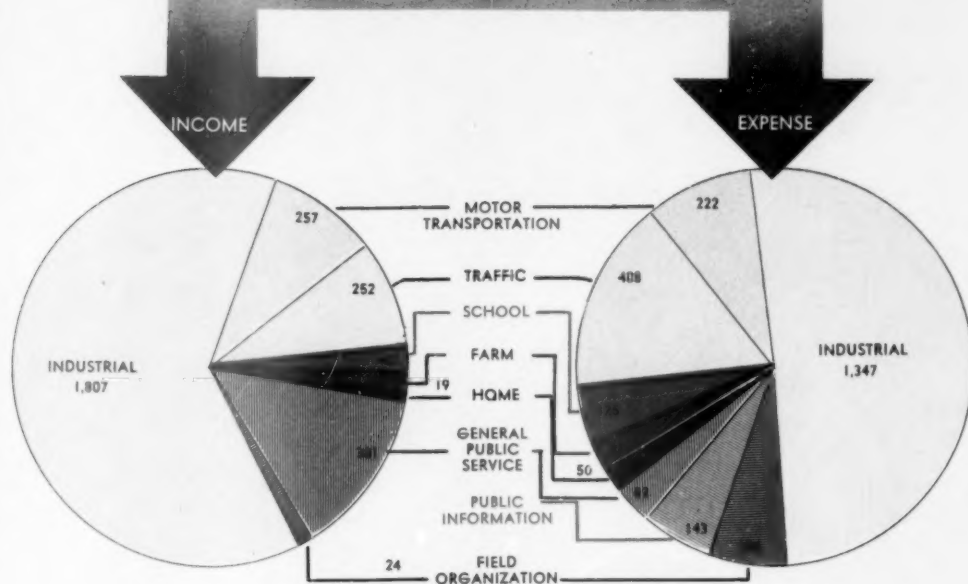
Last year contributions and grants for this work amounted to \$562,045 and the cost of

the work was \$843,416. The difference was made up by the Council out of income from dues and sales.

Contributions (which are deductible for tax purposes) ranged from \$25,000 down to \$25 in size and came from companies in practically every field of business and industry throughout the country.

ACTIVITY FINANCES — 1951

(THOUSANDS OF DOLLARS)



INCOME AND EXPENSE

INCOME

| | |
|---------------------------------|--------------------|
| Dues, publications and services | \$2,596,330 |
| Contributions | 562,045 |
| Other income | 41,000 |
| | <u>\$3,199,375</u> |

Trend in First
Eight Months, 1952

| |
|------|
| +22% |
| -4% |
| +12% |
| +16% |

EXPENSE

| | |
|--|--------------------|
| Publications and materials | \$1,155,850 |
| Technical and research | 681,491 |
| Administrative and general office | 518,973 |
| Sales of memberships, advertising and services | 262,425 |
| Local Chapter and Council development | 126,792 |
| Contributive fund solicitation | 77,022 |
| Publicity | 120,212 |
| | <u>\$2,942,765</u> |

| |
|------|
| +15% |
| +3% |
| +11% |
| +10% |
| +31% |
| +9% |
| +28% |
| +12% |

ASSETS AND LIABILITIES, DECEMBER 31, 1951

ASSETS

| | |
|--------------------------------------|--------------------|
| Cash | \$ 240,916 |
| U. S. Government Securities | 182,435 |
| Accounts Receivable | 414,088 |
| Inventories | 526,161 |
| Deferred Charges | 67,196 |
| Equipment and leasehold improvements | 304,348 |
| | <u>\$1,735,144</u> |

LIABILITIES

| | |
|--|------------------|
| Accounts Payable | \$ 104,331 |
| Taxes withheld and accrued expense | 20,311 |
| Deferred income—unfulfilled membership and service contracts | 638,000 |
| Contributions held for special programs | 78,400 |
| | <u>\$841,042</u> |

Net Assets employed for the benefit of members \$ 894,102

NATIONAL SAFETY COUNCIL, 425 N. MICHIGAN AVENUE, CHICAGO, ILLINOIS

Printed in the U.S.A.
SYM 152-64



Three Cities Honored For Fight on Noise

THREE U. S. CITIES—Atlanta, Jacksonville and Memphis—have been designated winners of the 1952 achievement award plaques of the National Noise Abatement Council for outstanding effort in their communities in resisting the growing problem of excessive noise.

While the three Southern cities were selected to receive the Council's achievement plaque for leadership in the battle of the decibels, four other cities also were awarded certificates by the council for exceptional civic service in conducting activities aimed at curbing din in home, office, street and factory, or for inaugurating a program. These cities were Salt Lake City, Little Rock, Dearborn, Mich., and Glendale, Cal. The Council also decided to grant a certificate of merit to the League for Less Noise of New York, of which Ernest H. Peabody, a pioneer in the anti-noise movement, is president, for its efforts to reduce traffic noise.

Memphis has won the achievement award for the eleventh time and is regarded as one of the quietest cities in the United States. The program there is spear-headed by Police Commissioner Claude Armour and is a city project. The Atlanta Women's Chamber of Commerce is sponsor of the noise abatement program there while in Jacksonville it is conducted by a

Help Fight TB



Buy Christmas Seals



We haven't heard of any dog sleds using Ansul equipment. But if they do there is no need for concern because of the low temperatures involved. Hundreds of Ansul Dry Chemical Fire Extinguishers are protecting hazardous locations and special equipment in the far north.

Standard Ansul models are approved for operation from -40°F. Special low temperature models are approved by Underwriters Laboratories for operation down to -65°F. All Ansul extinguishers provide effective and dependable protection for flammable liquid, gas and electrical fires.

SEE PAGE 43

This
PICTURE,
Can be worth
\$1,000⁰⁰
in the
SAVING
of FINGERS



Amputated
Fingers
COME
HIGH!

These figures are based on maximum rate of Illinois Workmen's Compensation from Division of Statistics and Research, Illinois Industrial Commission. (Figures for other states are higher).



LITTELL AIR BLAST VALVES

Pieces forced out safely by air. Blank parts weighing up to 2 lbs. are blown out of press with a standard Air Blast Valve.

LITTELL
Press-Vac SAFETY FEEDERS
Blanks fed from a safe distance of 14 inches.

Press-Vac operates from compressed air at 45 lbs. pressure which passes through a venturi to create a vacuum.

F. J. **Littell** MACHINE CO.
AIR DIVISION

4165 RAVENSWOOD AVE., CHICAGO 13, ILL.

District Offices: Boston and Cleveland

Write
for
Catalog



DO-ALL CORDED RUBBER FLOOR MATTING

Prevents slipping, falls and other costly accidents.

Hugs the floor. Beveled edges. Comes in rolls 20'5" long, 35" wide.

Four mottled colors: Venetian Red, Erin Green, Delft Blue and Mosaic.

Send coupon today for literature and prices.

AMERICAN MAT CORPORATION
1724 Adams Street, Toledo 2, Ohio
Please send literature and prices on Do-All Matting.

Name.....
Firm.....
Street.....
City & State.....
Name of Supplier.....

IN CANADA: American Mat Corp., Ltd., Canada Trust Bldg., Windsor, Ontario

special committee of the Chamber of Commerce.

"The fact that a city has been selected by the Council for recognition does not necessarily mean that it is a quiet city," said Paul Washburn, president of the Council. "It means that the city recognizes the noise problem and has undertaken to combat it through organized effort and education to reveal the ill effects of unnecessary noise. Also that it strives to enforce its anti-noise ordinances."

The President's Medal

Awards made by the National Safety Council for successful application of artificial respiration

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JAMES E. SPEED, rotary derrickman, The Texas Co., Daisetta, Texas—electric shock.

JAMES DOYLE HICKS, assistant boiler operator, Mississippi Power Co., Hattiesburg, Miss.—drowning.

CHESTER M. BLUSIEWICZ, electronic tester, Westinghouse Electric Corp., Baltimore, Md.—electric shock.

ANTHONY WEIDL, station helper, The Brooklyn Union Gas Co., Brooklyn, N. Y.—drowning.

Reader's Point of View —From page 54

newer insecticides is good compared with that of the old ones.

I made an attempt to obtain statistics from various states concerning poisoning incidents from insecticides, but was successful in obtaining pertinent information only from the state of California. I think that the statistics from California do not bear out the contention that the newer insecticides have as good a safety record as do the older ones.

For example, in the years 1950-51, in California (1, 2) there were reported to the California Department of Industrial Relations, 113 cases of illness from exposure to the older agricultural chemicals, while during the same period, there were 174 cases reported from exposure to the newer organic insecticides. The newer insecticides resulted in 54 per cent of the cases being lost time cases, whereas, 43.3 per cent of the cases arising from contact with the older chemicals were lost time cases.

Probably of greater importance is the fact that 79.8 per cent of those cases resulting from contact with the newer organic insecticides were systemic poisonings, whereas 40.7 per cent of those occurring from contact with the older chemicals were systemic poisonings.

Also a study of the statistics indicates that 30.6 per cent of the cases reported from old insecticide exposures occurred in in-

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dustries other than agriculture, whereas 44.5 per cent of the cases arising from contact with the newer insecticides occurred in industries other than agriculture.

This would indicate that there is a more widespread hazard from these materials. The record in the chemical manufacturing plants for instance, indicates that there were 39 cases reported in contact with the newer insecticides, whereas there were only 8 cases reported from the older materials.

While these statistics are from one state only, they certainly throw doubt on the theory that the newer insecticides have as good a safety record as do the older ones.

While, undoubtedly, these new insecticides are of great benefit in reducing crop losses from insects and are here to stay, I do not think that we should relax for one instant the vigorous precautions that are needed to handle these materials safely. Therefore, I believe that it is unfortunate that the article appearing in the August issue was given the headline it was, and it is also unfortunate that the general tone of the article is such as to imply that these hazards are fully recognized and sufficiently under control.

JOHN B. SKINNER
Industrial Hygienist,
Home Office Division,
Engineering, American
Mutual Liability
Insurance Co.

Reference: (1) California Bureau of Adult Health. Statistical Tables on Agricultural Chemicals Causing Occupational Diseases in California. 1950. (2) Ibid, 1951.

Occupational Vision

—From page 39

7. Prompt referral of employees with pathological eye conditions.

8. Referral of employees requiring refractions and prescription of corrective-protective glasses.

9. Provision of safety-glasses and goggles as well as professional fitting and subsequent servicing of such devices.

10. Adequate facilities for first aid to the eye.

11. Correct lighting through scientific planning.

12. Periodic check of environmental conditions.

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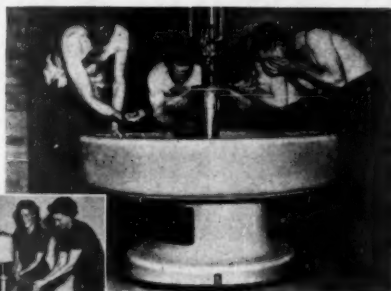
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as a part of management should do all possible to secure cooperation from the optometrists and ophthalmologists in his area. They should be enlightened as to the kinds of jobs performed and should be acquainted with the specific seeing problems which confront the employee. In turn, the ophthalmologist and optometrist should maintain their end of the communication line by proper reporting to management where necessary.

For the fulfillment of a program as outlined, teamwork is necessary by those concerned with its success—the safety engineer, personnel director, medical director, illuminating engineer, maintenance head, and the optometrist and ophthalmologist.

Management must be sold on the value of such a program and, today, we have company after company throughout the country ready to testify that every dollar spent on such a program is a dollar well invested and that the returns are immediate and continuous.

The employee, too, has to be convinced of his gains in such a program. Replacing a sense of insecurity, he will take pride in participating in a program designed to conserve his valued abilities. From the safety viewpoint, he will realize that good seeing means added security to his whole self and to his fellow employees.

There is an added item which does not appear in the previous breakdown. This is the fundamental item—the basis, as it were, of all that follows. Because of its particular significance, it is dealt with here separately. It is the matter of research in occupational vision techniques.

The problems unresolved are still numerous and challenging and they cover a variety of questions. Problems of screening techniques, visual fatigue, lighting, the use of color, field conditions for optimum seeing, peripheral vision (a comment at a Nela Park Conference for Visual Research Specialists in April, 1952 was, "As a pedestrian your extinction factor is inversely proportional to your peripheral vision."), visual skills training procedures, the prescribing

of bifocals and trifocals for industrial use, the evaluation of safety goggles and safety glasses, and a multitude of others confront us yet.

With 13 million men and women in the United States 65 years or older, increasing at a rate of 400,000 a year, our problems of industrial vision become increasingly related to geriatrics and our investigations of method to keep older age employees operating at peak performance is a real one.

We have only begun to put the pieces together and there are several that do not fit perfectly. The schools and colleges of optometry, the medical schools, the engineering schools, and the departments of psychology and physiology need the support of industry in the investigation of these many problems, which solved produce information which can be put to direct operational use.

Our values have changed—the old "eyeball" safety program has grown to include the human who sees through the eyeball.

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CARMAN FISH, Editor.

Sworn and subscribed before me this 19th day of September, 1952.

PAUL H. STAEDKE
Notary Public

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Write for Descriptive Bulletin No. 564

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When the Aridor Company, Chicago, recently received the National Safety Council's Certificate of Recognition, department certificates of recognition were presented by the company to the safety committeemen who had helped win the award. Each certificate carried the number of safe days worked by the department. Total exposure covered by the award was 497,701 man-hours.

The National Safety Council Award and a Certificate of Merit from Liberty Mutual Insurance Company were presented at a recent dinner for employees. It was attended by officials of the plant and of the parent organization, Ball Brothers Company.

Turpentine Vs. Gasoline

Generally speaking, the relative ability of a flammable liquid to produce an explosive mixture (the leanest that will burn) may be judged by its lower explosive limits.

For example, hazardous gasoline is known to be, its lower explosive limit is 1.6 per cent by volume in air. Turpentine has been found to be explosive in a concentration of only 0.69 per cent by volume in air. Thus, substantially less than half as much vapor from turpentine as from gasoline, when mixed with air.

Retirement

—From page 25

tions, growing up in this twentieth century, required the most instruction.

It was also, perhaps bluntly, explained that no federal, state or industrial relations plan, in our country, can dictate the thoughts and behavior pattern of any one individual whether he be possessed of courage or fear, loneliness or contentment, physical and mental health or ill health.

Maturity is the result of each person's own thought and action—only the immature lean on others—these contentious matters were arbitrarily and, I hope, tactfully set down.

There are four basic points I

would like to elaborate upon:

1. Good health
2. Something to do
3. Some place to live
4. Someone who cares

Let us begin with the first point—health. A review of the periodic examinations of workers who have been continuously employed in any company over a period of 25 or 30 years, and who now are approaching 60 or 65 years, will show the onset of degenerative disease during the period of late maturity. These diseases, generally included in the term cardiovascular renal disease, plus arthritis, diabetes and malignancy, may be prevented if their prodromal signs are sought and recognized even before age 40. They are detectable in the beginning over-nutrition, arteriosclerosis with attendant hypertension, the little strokes which leave minor personality changes, the mild angina of effort and, perhaps, just a dyspnoea of ordinary exertion, the painful joints, insomnia, emotional imbalance, and the peripheral vascular change.

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Any step to prevent invalidism or the wastage of hard-won experience is well worth determined effort. The economic loss to industry in the breakdown of the secondary level of executive, supervisory or foremen personnel, just when they are becoming of greatest worth to their employers, is greater than we know. And of even more tragic importance is the loss to the man himself and to his family.

You may rightly ask: "How can these degenerative diseases be prevented, even when the warning signal has been observed?"

It is all too true that it takes a perforated ulcer to bring some individuals to their senses, and there are even too many instances in which the perforation is not sufficient and even a gastrectomy does not have proper braking power.

While various causes have been assigned to this cardiovascular renal syndrome, including the hereditary factor, it is becoming evident at the moment that the stress and strain of modern living play an important role.

Work, whether mental or physical, and even of long duration in the absence of tension, appears to be a small etiological factor. Even the monotonous, repetitious duties of the average industrial worker, whether by hand or brain, have but little effect.

But add to work:

Worry, whether at home, office or work place;

Hurry, especially in employment where manual creative satisfaction is not obtained, or where the fundamental training is lacking;

Over-nutrition, especially when accompanied by worry and hurry, which disturbs homeostasis and results in breakdown.

Between the ages of 40 and 50 years is the optimum time to encourage the individual to think through what is expected of life, and to encourage him or her to be guided by the principles of right living. The basis of prevention of ill health in later life, or the creation of positive health with plenty of reserve, is the periodic medical examination. This annual or semi-annual medical examination should consist of a complete



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and detailed family history, a personal history to include a work history, followed by a complete assay of the human machine with an estimate of the quality and quantity of the reserve present.

Time is of the essence in the conduct of these examinations. There must be time to permit the patient to settle down for a period of conversation, permitting observation and recording of the physical and emotional story. In such talks the blighted as well as the fruitful hopes and aspirations are detailed. There must be an opportunity to bring out the at-work or office relationships, as well as the social requirements. When all is completed, and sometimes with the aid of discreet counselling, the patient often will make his own diagnosis and map out his own future conduct.

The bond of interest established by a sincere annual periodic medical examination, aided by the sympathetic understanding of a nurse, is fundamental in any preventive or conditioning project.

While around the age of 40 years is the best time to begin the conditioning or preventive program from the health angle, it has been our experience that it is after age 55 that most employees will permit the ascendance from the sub-conscious to the conscious mind of thoughts about what to do upon retirement.

A lot of people simply close their minds to thoughts about their own retirement. Even the distress of friends who have retired at age 65 or earlier because of some physical or mental breakdown often does not change the attitude, "it will not happen to me."

There is a deep-dyed idea in the minds of many people that there is something disrespectful about growing old. The idea is fostered very greatly by the advertisements for all kinds of nostrums which claim to help one mask the advancing years—the hormones and vitamins, hair dyes and cosmetics, and all the host of products which are glibly prescribed to make one feel young, or at least to hide the fact the years are creeping up on us.

In our classes, we emphasized three things both through class in-

struction and in individual interviews with employees and their wives. These are the three essentials to a happy senescence.

1. Something to do.
2. Some place to live.
3. Someone who cares.

Something to Do

The ten year period prior to age 65 passes more rapidly than any other decade in life. It does, however, provide time to develop an avocation or to groom an already existing leisure time activity into a sustaining vocation. The individual may still learn creative or active pursuits which will supply work satisfaction, plus some financial return, even to the point of professional standing.

I know of one individual, for example, who took up oil painting as a hobby during his late 50's, and following the death of his wife. He discovered that he had substantial latent talent in the field of art and has produced scores of paintings in the past few years which have given him not



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only a wealth of inner satisfaction, but a very real source of income if he cares to market his work. An invaluable by-product of his hobby has been the sharing of his interest in art with other people of his own age group, in art classes and societies, so that he is gaining companionships that will last through the rest of his life.

This man, I admit, is a rare individual. The creation of an interest in the average individual at age 55 or older is extremely difficult. There is some contrariness in most people which will defy you to name a suitable vocation for them.

The average person of 55 or older already has some hobby or active pursuit developed in earlier years, and he is apt to cling to these interests even in the face of health or other factors which indicate a need for change to something else.

There is, for example, the man of 55 who has long prided himself upon his golf game. He has been accustomed to playing 36 holes each week end, and perhaps several nine hole rounds during the week. He lives in rosy anticipation of his retirement years with the thought that once his work life is behind him, he will be able to play golf day in and day out for the rest of his years. He forgets that Nature already is applying the brakes and that the chances are that when retirement age rolls around, he will be physically unable to fulfill his ambition to make golf the one absorbing interest of his life. Hobbies like golf, collecting, hunting, and so forth are excellent for active years, and are necessary relaxation for the mental balance, but there comes a time when such active pastimes must be curtailed and new creative activities developed to supplant them.

In direct contrast to the man with active pursuits, we have the individual whose main interests lie in the so-called spectator role at radio, television, sports, or bridge. Retirement brings such ample time for such things that interest may change to boredom. But it is not easy to turn people with such interests into the study of cabinet making, chicken raising

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or rose culture.

A good many people will need a post-retirement vocation which is not only interesting and satisfying, but which may yield some financial return. The time to test one's aptitudes for such things is during late maturity, when one is still earning a regular wage and salary and can experiment with less financial risk than after retirement. If a pursuit proves uninteresting or unsuitable, it can be discarded with far less financial injury than if time and capital have been invested in it after retirement.

One of the most common dreams of the man who finds retirement creeping up on him is the establishment of a small business. He thinks it will be easy to set up a shop of some kind which will give him an interest in life and a moderate revenue. But we all have seen scores of instances in which the small business dream ended disastrously, simply because the individual had not known what he was getting into.

It has been our experience, in the conduct of our classes, that lectures and articles on post-retirement pursuits offer far less incentive than a meeting of a half-dozen persons who have firmly established interests, along with a half dozen who are groping for an outlet. For example, we might have a few men who are absorbed in the culture of gladioli, and who have found that the raising of these exotic flowers is not only a fascinating interest, but a source of revenue through the sale of blooms or bulbs. If they are brought together with men who have no such interest, and who are seeking an outlet for their later years, they often transmit their enthusiasm and their knowledge.

The physician and nurse can be the means of bringing such people together.

The problem of "something to do" is serious business for people approaching retirement. There is nothing more unsettling to the human mind than to have nothing to do. We all know the tragedy of boredom among older people who try to substitute purely social pursuits for the interest and activity once associated with their daily

work.

When the individual has no work to do, the mind turns inward. Ills are imagined, pill boxes are carried everywhere and the medical profession is burdened with patients with complaints, many imaginary.

Something to do—work that will go on during retirement—is the fruit of seed sown at 50, cultivated and nourished in the period from 50 to 65, and yielding a continuing harvest throughout the remainder of life.

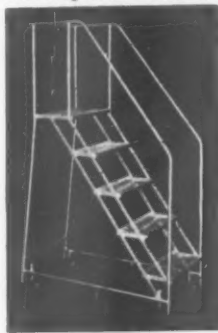
Men and women who have happily planned the things they will do after retirement generally have few worries as to where to live, but it is a tragic problem for many who have made no such plans.

Some Place to Live

There was a three-day conference at the University of Michigan in July, built around the need of the aged for some place to live. It was a vital conference, for many people of our senile population are not properly cared for.

"Where to live" is not a simple

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Now improved design now being made from 1" diam. round furniture tubing.

Mounted on Swivel Brake Casters which allow the ladder to be rolled freely when no one is on it. When you step on the ladder the rubber cushioned legs rest on the floor and prevent rolling.

Made in 7 heights—18" 2 Steps, 27" 3 Step, 36" 4 Step, 45" 5 Step, 54" 6 Step, 63" 7 Step, 72" 8 Step.

All are made in either 20" or 26" width. Send for Circular No. 52-N and prices on these ladders and our full line of Wood Rolling Ladders.

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matter to be decided quickly or thoughtlessly if happiness is to result. Only by proper planning prior to the age of 65 is it possible to avoid some distressing consequences.

The older we become, the less we like to change. It seems more difficult for us to adapt ourselves to new ways, new places, new habits. We cling to the familiar things, our homes, old pictures, old books, old friends, even the stores we have dealt with for many years.

There is a very real danger in uprooting ourselves from familiar surroundings, but there are also dangers in clinging too firmly to the past. We all know of elderly couples who are draining their financial resources and working themselves to death trying to keep up the large homes which once were necessary for their growing families. Their only excuse for keeping such large homes is that there is a possibility of the children coming home for visits, but the pattern of life is such that these visits inevitably become fewer and fewer, and more widely spaced, as the years go by.

Some people approaching retirement are tempted to return to their old home towns, often without considering that the people there have changed, their friends are gone, and that the old home town may have grown into a city or receded into a village.

Others find that northern winters are becoming tiresome and unpleasant to them, with furnace troubles and snow and ice, and Florida and California seem attractive.

True, there are people who will find happiness in going back to home towns, or in moving to Florida or California, but chances are many will not.

There also is the familiar problem created by the children who want their aging parents to live with them, or to move back into the old home to save or share expense. Often this is a case of sentiment without sense. The modern home rarely permits two, let alone three generations to live harmoniously under a single roof.

Wholly aside from economic considerations, there are two fun-

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damentals in consideration of "where to live"—familiar surroundings and old friends. These should be thoroughly considered in that crucial ten-year period before retirement. One can experiment by moving to a smaller place, taking the precious possessions and developing new friends and interests long before the "R" day arrives. One can try out Florida or California or any other dreamed-of place by spending vacations there, and finding out if these distant places live up to expectations before it is too late.

Many people have dreamed all their lives of a place in the country, and at age 50 it is quite feasible to experiment, providing one remembers that things one may do quite easily at age 50 may be beyond one's physical ability at age 65. Often a taste for country living will be satisfied by a trial, and enthusiasm will vanish while there still is time to establish a home in other surroundings.

All the needs and wants of later life are so interwoven and interdependent that it is difficult to discuss them separately, but I think the outstanding one of all is the imperative need for "someone who cares."

There is no greater heartbreak for the aged than that combination of loneliness, of uselessness, of feeling unwanted. It is a dreadful burden, and presents perhaps the greatest problem of all in respect to people in the age of senility.

If one were to study all the reasons given by people applying for admission to old folks' homes, one would find abundant evidence of fear of living alone, fear of something happening to them, such as a broken hip, a sudden stroke or heart attack. They long to be near someone who cares, even a little.

It is my contention that loneliness can be prevented by good health, congenial living arrangements, and some necessary activity, provided that there be developed, if it is not already present, unselfishness and a desire to help others.

We often wonder at the number of people of advancing years we see at lectures, concerts, church gatherings, or political meetings.

I doubt whether many of them are there because of a desire for cultural attainment or to add to one's store of knowledge. More probably the real motivation, perhaps unrealized and unexpressed, is simply a desire to be with other lonely people and to try to keep in contact with the world about us.

How many men serve on community projects, act as directors of the various charities, take leading parts in various activities, principally to bolster their ego and to obtain a little adulation or recognition for work well done. It is indeed a blessing that such things exist, and there is no doubt many worthwhile organizations derive great benefit from the interest of the oldest, but again, how many of these "do-good" organizations owe their very existence to the crying need of the elderly to be recognized and to be useful.

In our courses we have emphasized that one of the best preventives for loneliness in later life lies in the maintenance of the family unit. Do the children like to come home and bring their

families? Do these children like to have their parents visit them? It all depends upon a good relationship established years ago and carefully extended through the adolescent and adult periods of the children.

Such relationships are almost impossible if the father of the family becomes so immersed in his business and club activities that he has little time to spend with his children, or if the wife becomes so involved in social or club obligations that she has few evenings at home. All the traditions, the culture and the family heritage of moral fitness that have been growing with each preceding generation could be passed on to the next generation.

We all know the little things that go to make up a happy and worthwhile family. Much of it is a matter of sharing, inside the family and out. It may be expressed in such simple gestures as a kind note to a friend, a delicacy sent over to a sick neighbor, the family dinner with one or two friends as guests, the remembrance of birthdays and anniversaries, the disciplines of good manners. Graduates from such schools of homemaking are rarely lonely, for they have learned the knack of making and keeping friends—of always having someone who cares.

My observations as a general practitioner, my experiences as an industrial medical director and as the leader in employee group meetings, and my experiences over a great many years of dealing with people, have brought me to the firm conclusion that the happiness of an older population depends not so much upon economic security and the aid of paternalistic agencies, as upon individual preparation for old age.

Writings and addresses, while necessary to spread understanding of the problems and ideals of later life, accomplish little unless the physician and nurse, in industry and in private fields, set an example and make the time to listen, to examine and to counsel during the preventive years of late maturity all the executive, supervisory and hourly-rated workers who eventually must come to the age of retirement.



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area it covers . . . how much
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Safety Library

—From page 64

Fire Protection

National Fire Codes. Vol. II. The Prevention of Dust Explosion. 1952. Revisal. Published by National Fire Protection Association, 60 Batterymarch St., Boston, Mass. 1952. 288p. Price \$3.00.

New Developments in Upright Sprinklers. By Norman Thompson. Published by National Fire Protection Association, 60 Batterymarch St., Boston, Mass. 1952. 18p. Price 50¢. (Reprinted from NFPA Quarterly, July 1952).

Standards for Dip Tanks as recommended by the National Fire Protection Association. Published by the National Board of Fire Underwriters, 85 John St., New York 38, N. Y. 1952. 19p. Free (NBFU Pamphlet No. 34).

Standards for the Installation of Air Conditioning. Warm Air Heating. Air Cooling and Ventilating Systems as recommended by the National Fire Protection Association. Published by the National Board of Fire Underwriters, 85 John St., New York 38, N. Y. 1952. 29p. Free (NBFU Pamphlet No. 90).

Food Industry

Standards for the Prevention of Dust Explosions in Flour and Feed Mills. As recommended by the National Fire Protection Association. Published by National Board of Fire Underwriters, 85 John St., New York 38, N. Y. 1952. 18p. Free (NBFU Pamphlet No. 61C).

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Health

Employee Health Service in Small Plants. Published by Metropolitan Life Insurance Co. One Madison Ave., New York, N. Y. 1952. 24p. Free.

Liquefied Petroleum Gas

Liquefied Petroleum Gas Fires and Explosions. Published by National Fire Protection Association, 60 Batterymarch St., Boston, Mass.

39p. 1952. Price 50¢. (Reprinted from NFPA Quarterly July 1952. NFPA No. Q46-2).

Petroleum Industry

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Proceedings—37th Annual Convention of the International Association of Industrial Accident Boards and Commissions. Workmen's Compensation Problems. Published by U. S. Bureau of Labor Standards, 1952. 209p. For sale by the Superintendent of Documents, Washington 25, D. C. Price 45¢. (Bulletin No. 156).

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Aeronautics

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Carbon Monoxide

Control of a Multiple Source Hazard of Carbon Monoxide. By George S. Reichenbach, Jr. and Allen D. Brandt. American Industrial Hygiene Association. Quarterly, Sept. 1952. p. 166.

Fire Protection

Elmira Fog Nozzle Tests Develop Interesting Data. Fire Engineering. Sept. 1952. p. 765.

Ten Firemen Killed, Many Hurt in Danish Naval Arsenal Blast. Fire Engineering. Sept. 1952. p. 75J.

Foundries

The Industrial Hygiene Engineer. By S. C. Rothmann. American Foundrymen. August 1952. p. 56.

Goggles

Eye Protection at the Jeffery Mine of Canadian Johns-Manville. By I. H. Sloane. Canadian Mining Journal. Sept. 1952. p. 81.

Eye Protection Program. By Douglas J. Wood and Howard Kohn. Industrial Medicine and Surgery. Sept. 1952. p. 433.

Investigation of Accidents

Techniques of Accident Investigation and Effective Use of the

Results. By Robert W. Gray. Southern Pulp and Paper Manufacturer. Sept. 10, 1952. p.32.

Mines

Accident Prevention at Coch-enour-Williams Gold Mine. By E. R. Olson. Canadian Mining Journal. Sept. 1952. p.59.

Organizing for Safety. By W. A. Stanbury. Coal Age. Sept. 1952. p.71.

Three-Voltage AC Ups Efficiency with Safety. Coal Age. Sept. 1952. p.91.

Magnesium

Safe Handling of Magnesium. I and II American Machinist. Sept. 1, 1952. p.147.

Noise

The Measurement of Industrial Noise. By Bon Vallet. American Industrial Hygiene Association. Quarterly. Sept. 1952. p.137.

Petroleum Industry

What's Your "Drilling S. Q?" (Safety Quotient) By Harry H. Hillman. Oil and Gas Journal. Aug. 25, 1952. p.106.

Small Plants

Safety Is Everybody's Business. By G. Stuart Mansfield. Modern Lithography. Sept. 1952. p.36.

Power Press

Don't Overlook Operator Safety in Press-Tool Design. By H. A. Faulkner. American Machinist. Sept. 1, 1952. p.121.

Railroads

How The Santa Fe Cleans Tank Cars. Railway Age. Sept. 8, 1952. p.48.

Ventilation and Exhaust Systems

Design Velocity in Industrial Exhaust Systems. By Arthur C. Stern. American Industrial Hygiene Association. Quarterly. Sept. 1952. p.129.

Southpaw Injured on Right-Hand Setup

A LEFT-HANDED OPERATOR substituting on a job set up for right-hand operation suffered an injury which terminated a record of 1,349 safe days (4,125,640 man-hours) at Martin-Parry Corporation, Toledo, Ohio.

The injured man, who had been employed as an Exello lathe operator, had been assigned to a punch



The Answer to INDUSTRIAL DERMATITIS
is just as simple as this...

... in some of the even larger plants, they have found that by using only two types of Skin-Cote, they get complete protection and have reduced dermatitis to one of their minor hazards... to a problem of simply seeing that the employees use it. To encourage the use of Skin-Cote, more and more companies are supplying it in individual jars rather than issuing it from *bulk containers in the tool crib... Send for eight-page catalog and complete information—you will find that the answer to Industrial Dermatitis can be just as simple as this.

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UNIT FIRST AID KITS**

are made of heavy gauge steel and are furnished with standard size unit packages containing a complete assortment of First Aid items. Each Kit is furnished with an illustrated instruction sheet and each package has a full description of contents and illustrated method of application plainly printed on the outside.

Assortments can be made to your specific requirements upon request.

Further information, descriptive literature and prices will be furnished upon request.

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Can't
Fall
It is
a Life
Saver**

IT LOCKS — IT HOLDS

SAFETY DEVICE FOR LADDERS

Prevents Injuries by Falling

EASY TO INSTALL

Fastens to Rung, Peg, Pole or Frame

SIMPLE TO OPERATE

Men Can Climb—No Instruction

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High Safety Factor—
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STOP THAT FALL



SAFETY LIFELINE LOCK for SCAFFOLDS and SWINGS

Locks automatically and instantly.
Slips on ordinary rope lifeline at
ground. Moveable up or down with
man. In instant locking position at all
times whether stationary or being
moved up or down.
Snaps into safety belt, no adjusting.

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press to take the place of an absent worker. The press was properly guarded with a foot pedal guard and a swing arm guard, but the latter was set up for a right-hand operator. He lost a portion of his left index finger.

Actually, the employee suffered no loss of time beyond the shift on which the injury occurred and he was anxious to keep the record clear. However, according to National Safety Council rules, it had to be recorded as a disabling injury.

Green Cross News

—From page 40

and October 14 in that city. The three sessions were well attended and featured addresses by outstanding safety authorities, visual aids, panel discussions, playlets and demonstrations. Appropriate certificates were awarded those who attended at least two of the sessions. A general session followed the sectional meetings at each meeting.

Railway's Safety Ads

The Reading Railroad System has been promoting safety for its employees and the public generally through a series of display advertisements published in three Philadelphia dailies and in 100 other dailies and weeklies in the territory served by the line. The series of 13 striking advertisements have a three-way appeal—safety on the job, at home and at railway crossings. The ads are strong and convincing and the novel educational project is a real pioneering job by the Reading line.

100 Fire Films Listed

The West Virginia Safety Council has just published a 32-page directory of "Fire Films" for its members. In a foreword, Robert G. Krupp, chairman of the Fire Prevention Division of the Council, points out the great need for specific, complete information on fire prevention and protection movies, their sources and availability. Each film story is described and complete data are provided as to the size, length and type of film. More than 100 fire films are listed.

Industrial Health

—From page 58

in charge of Group A.

In the first period studied, which was simply a study of output before the workers knew that any study was going on, Group B showed very significantly higher output than Group A.

In the second period when the workers knew that they were being studied, there was an increase in output in both groups, but a considerably greater increase in Group A so that for the quarter during which the groups were actively being studied, Group A had a slightly greater output than Group B. This is pretty much in accord with previous observations that the knowledge that they are being studied is apt to change the productivity of any group and is most apt to increase it.

The third period of study was the fourth quarter of the year so that three months had elapsed since the intensive study and both groups had had an opportunity to settle down after the upheavals consequent on this intensive study and on the change in subforemen, who were switched to the opposite groups after the period of intensive study. In spite of this period during which they had not been the objects of any special study, the productivity of both groups was considerably higher than it had been in the first period of study. The productivity of Group B in this third study period was again higher than that of Group A.

In contrast to most other investigations and contrary to expectations, it was found that the group which was less healthy and which was less industrially effective and less absentees than the more healthy and more industrially effective group.

The healthier group was more closely knit as shown by more friendships which extended beyond the hours at the works and apparently this closer and more cordial personal relationship was sufficient to improve the industrial morale and effectiveness.

It's hard to reconcile net income with gross habits.



Doehler-Jarvis Corporation, world's largest producer and finisher of die castings, utilizes energy in color in huge Toledo, Ohio, plant to improve working conditions.

Pittsburgh Color Dynamics

Increases production efficiency . . . Lowers manufacturing costs . . . Reduces accident time loss

How Pittsburgh COLOR DYNAMICS helps management and workers alike is being demonstrated daily in a wide variety of industries.

● This modern method of putting the energy in color to work helps to increase production efficiency and lower manufacturing costs at the same time that it improves working conditions, simplifies housekeeping and reduces time-loss accidents.

● An excellent example of these results is the large Toledo, Ohio, plant of the Doehler-Jarvis Corporation.

● This company is the world's largest producer and finisher of die castings. Its experience in this field dates back to 1905, when H. H. Doehler invented the first metal die casting machine. Today the Doehler-Jarvis Corpora-

tion makes castings for motor cars and trucks, radio and television sets, household appliances, business machines and a great many other products.

● The huge Toledo plant was painted according to COLOR DYNAMICS several years ago. The benefits from this are best summarized by Robert H. Kitzman, vice-president in charge of manufacturing:

● "As in most factories, it had been our custom to paint our plant and equipment periodically to protect it from wear and deterioration. Then we decided to color-engineer our facilities the COLOR DYNAMICS way.

● "By using focal colors on working parts of machines, in contrast to eye-

rest colors on stationary parts, we help our men to see their work better. By using eye-rest colors on walls, as well as colors with high light reflection on ceilings, we further reduce eye strain. This lessens physical fatigue.

● "Safety colors which mark hazard areas help to reduce danger of accidents. These improvements give us better workmanship, greater volume, higher morale and a better relationship between management and employees."

● Why not test the practical value of COLOR DYNAMICS in your plant. Use this modern painting system to put color to work on a machine or two—or in a complete department—and see the difference it makes.

COLOR DYNAMICS Engineering Study of Your Plant — FREE!

● For a complete analysis of the service COLOR DYNAMICS can perform for you, send for our free, profusely illustrated booklet. It explains simply and clearly how to put color to work on machines, walls, floors, ceilings and mobile equipment. Better still, let us show you exactly how to apply it in your plant. We'll be glad to submit a color engineering study of your entire factory, or any part of it, without cost or obligation. Call your nearest Pittsburgh Plate Glass Company branch and arrange to have our COLOR DYNAMICS representative see you at your convenience. Or mail this coupon.

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☐ Please have your representative call for a Color Dynamics Survey without obligation on our part.



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SAFETY

POSTERS

POSTERS

MAKE THE MOST OF IT!

THE 1952 Directory of Occupational Safety Posters contains miniatures of 744 posters which are in stock. These are top-notch selections on a great variety of subjects. Copies of the Directory have been sent to all National Safety Council industrial members. Additional copies are available at 50 cents each—write to Membership Dept., N.S.C.

Posters miniatures on this page and the two following are NEW—produced for the first time this month. Excepting the Jumbo poster (below, left) all will be in stock throughout 1952—the same as those previously published in 1952 issues of the NEWS. The posters shown in black-and-white on the two following pages are actually printed in two or more colors.

MAKE THE MOST OF YOUR POSTER SERVICE by selecting from the brand new posters shown on these pages each month and from the hundreds of illustrations in the 1952 Directory.



make *Every* day
a Holiday from
accidents

NATIONAL SAFETY COUNCIL
9759-C 25x38

Above new "C" poster, issued monthly, is indicative of the other two color posters—shown in black and white on the following pages and in the 1952 Poster Directory.



JUMBO POSTER for DECEMBER 1952

The Jumbo poster, issued monthly, is designed for outdoor use and is available to members on annual subscription but is not stocked. Its actual size is 9' 11" by 11' 8".



"YOUR PAST—CARELESS.
YOUR PRESENT—INJURED.
YOUR FUTURE—UP TO YOU."

NATIONAL SAFETY COUNCIL

9750-A

8 1/2 x 11 1/2

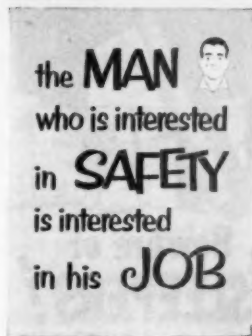
This new four color poster is illustrative of the 72 four color posters shown in the 1952 Poster Directory.

Electrotypes of poster miniatures on this page are not available, nor can payroll inserts be supplied.

Posters below are printed in two or more colors
(Available only in sizes indicated)



NATIONAL SAFETY COUNCIL
9729-A 8½x11½



NATIONAL SAFETY COUNCIL
9725-A 8½x11½



NATIONAL SAFETY COUNCIL
9748-A 8½x11½



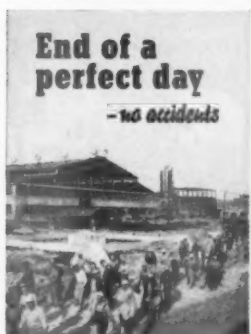
NATIONAL SAFETY COUNCIL
9691-A 8½x11½



NATIONAL SAFETY COUNCIL
9720-A 8½x11½



NATIONAL SAFETY COUNCIL
9689-B 17x23



NATIONAL SAFETY COUNCIL
9741-A 8½x11½



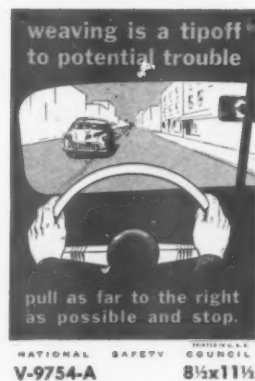
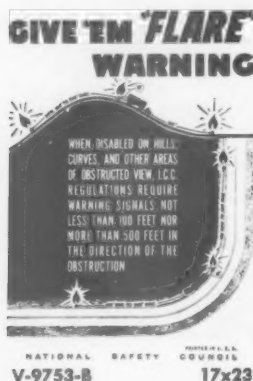
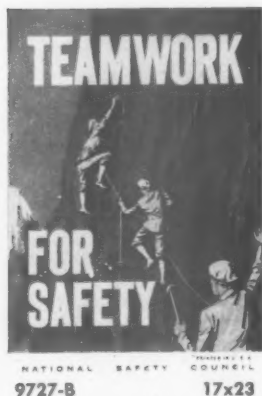
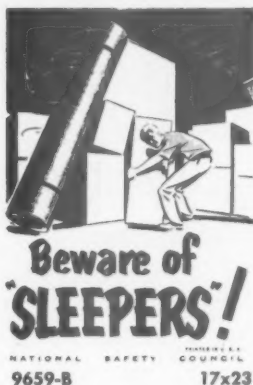
NATIONAL SAFETY COUNCIL
9671-A 8½x11½



NATIONAL SAFETY COUNCIL
9670-A 8½x11½

Electrotypes of payroll inserts can be furnished on all poster illustrations shown above.

Posters below are printed in two or more colors
(Available only in sizes indicated)



Electrotypes of payroll inserts can be furnished on all poster illustrations shown above.



Tanners Safety Manual

The *Tanners' Safety Manual*, prepared jointly by a special safety committee of the Tanner's Council of America and the Industrial Department of the National Safety Council, is now ready. This 70-page manual gives concise information for setting up a safety program in the average tannery. With minor changes required by local operating conditions and types of processes, the plan set forth can be used by organizations of all sizes.

The Manual is divided into seven parts. The first section, Accident Prevention Program, is a general survey of the accident problem. The other sections, Plant Hazards, Guarding Light and Heavy Leather Tannery Machines, Handling Materials, Safe Practices in the Use of Chemicals and Solvents, Fire Prevention, and Accident Records and Cause Analyses, are detailed accounts of these special phases of the prevention program. The sections on guarding tannery machines and on safe practices in using chemicals and solvents will be especially useful to the tannery safety engineer who is looking for practical solutions to his problems.

The Manual is available from the Tanner's Council of America, 411 Fifth Avenue, New York, N. Y., for \$1.90 a copy.

Safety Belts

The ASSE and the Council have been sponsors of recent investigations on the maximum decelerative force which the human body can tolerate applied at the waist or under the arm pits. The report summarizing this work, done at the Department of Physiology of Ohio State University and at the Allegheny Ballistics Laboratory, has just been released. The data

furnished in the report should supply basic information from which to develop new and better safety belts and harnesses.

Single copies are available from the National Safety Council for 85 cents.

Chemical Laboratories

Reprints of *Safe Practices Pamphlet 60, Chemical Laboratories*, are now available. The pamphlet, which is appearing in the NATIONAL SAFETY NEWS in two sections, is not a revision of the 1942 edition, but an entirely new work. It is divided into four sections, and the discussion in each section is developed according to the importance the problems assume in laboratory safety. There is a section on the permanent laboratory structures which is relatively complete. Following this section is one on

laboratory apparatus. This aspect of the problem is considered in light of the Council's industrial experience.

There is then a section of reagents, and although this discussion is quite full it is intended to remind the chemist that the material he takes for granted is hazardous, rather than to list all the hazards of reagents.

The last section concerns laboratory operations and stresses the need for personnel training in first aid and use of personal protective equipment and fire fighting equipment.

Member prices: 1-9, 45¢ each; 10-99, 40¢ each; 100-999, 35¢ each.

Safety Zoo

A different type of safety publication is ready for distribution. A description of the Council's newest employee booklet, *Safety Zoo*, will be found elsewhere in this issue.

Member prices: 1-9 20¢ each; 10-99, 16¢ each; 100-999, 12¢ each; 1000-4999, 9¢ each; 5000-9999, 8¢ each; 10,000-19,999, 7.5¢ each; 20,000 or more, 7¢ each.

Dramatizing 3,000,000 Hours

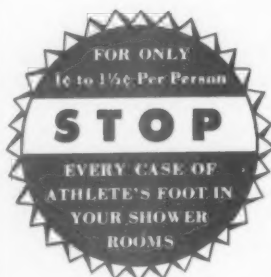


WHEN THE CHEMCEL PLANT at Bishop, Texas, won the National Safety Council's Award of Honor for operating 3,000,000 man-hours without a disabling injury they staged this demonstration in front of the plant with employees holding the numerals.

An extensive training program

started six years ago is now showing results at the plant which is the principal chemical operation of the Celanese Corporation of America. Along with reduction of accidents have come better house-keeping, decreased waste of materials and removal of many fire hazards.

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Powered Hand Trucks

—From page 35

(b) Lead the truck from either the right or left side of the handle and face the direction of travel. During forward travel, keep one hand on the handle.

(c) Back powered hand trucks onto elevators to eliminate the chance of being caught between the handles and the elevator walls. Operate a truck in reverse whenever it must be run close to a wall or other obstruction.

(d) Go ahead of the truck at other times.

(e) Give pedestrians the right of way at all times.

(f) Stop at blind corners, doorways, and aisle intersections to prevent collisions.

(g) Operate the truck at a safe speed for existing conditions. It should never be operated faster than a normal walking pace.

(h) Never handle flammable or corrosive liquids except in approved containers.

(i) Never ride the truck unless it is specifically designed for the driver to ride.

(j) Never permit others to ride the truck.

(k) Don't indulge in horseplay.

12. A continuous check should be maintained on all truck operators to detect unsafe practices. Corrective action should be taken for all violations of safety rules or instructions.

Loading

13. Trucks must be loaded so as to minimize the possibility of the load or any part of it falling off and endangering the operator or others. The maximum rated load of the truck should be plainly marked on the truck. Fork lift models should show the capacity at specified load centers used.

14. Operators should be instructed in the following safe loading practices:

(a) Refuse all skids and pallets that are not properly loaded and all pallets that are damaged so as to make them unsafe.

(b) Wherever possible cross-tie or otherwise lock together boxes, cartons, or other load units.

(c) Don't exceed the load limit of the truck.

15. The maximum height and width of loads can be established by specifying the number of units

high and wide for each kind of load. Consideration should be given to the weight, stability and clearance of the load in relation to door openings, and to floor load capacity.

Safeguards

16. All powered hand trucks should be equipped so that the brakes will be applied when the handle is in either the fully raised or the fully lowered position. When the handle is released, it should automatically apply the brakes.

17. Where practicable, disc guards should be fastened to the two ends of the handle crossbar to prevent the operator's hands or the controls from coming into contact with obstacles when the truck must be maneuvered in close quarters.

18. The wheels of many powered hand trucks can be considered guarded by their position under the frame or lift platform. However, where the wheels might injure the operator or others, wheel guards should be installed. (Figure 2.)

19. Keyed ignition or switch locks should be provided to prevent unauthorized use of trucks. (Figure 3.)

20. High-lift platform rollers (Figure 4) and chain sprockets (Figure 5) should be guarded.

21. Trucks should be provided with a horn or other warning device, operated by a button on the handle. (Figures 5 and 6.)

22. Some companies have installed prism-shaped guards to prevent operators from sitting on the battery box to operate the truck. (Figure 6.)

23. Trucks may be painted in distinctive colors, such as yellow or black and yellow in stripes, for greater visibility.

Area of Operation

24. Floors where powered hand trucks operate should be kept in good condition and should be of adequate load capacity.

25. Adequate space for flow of traffic should be maintained. White lines painted on the floor

are recommended to indicate aisles, work spaces, and storage and shipping areas.

26. Special precautions should be taken if operating areas include platforms or other elevated structures to prevent operators from running trucks off the edge of such structures. A series of diagonal black and yellow stripes may be painted along the edge of the platform or fixed or movable curbs or barriers may be installed at the edge.

Inspection and Maintenance

27. A parking area should be designated for powered hand trucks. Lines should be painted on the floor to indicate the placement of each unit. Employees should be required to park trucks in this area when they are not in use.

28. Operators should be held responsible for checking the mechanical condition of trucks daily. When a truck is used by a number of persons, one of them or a maintenance employee should make the daily inspection.

29. Operators should be instructed never to make adjustments or repairs on trucks, but to report any faulty mechanical conditions for correction by the maintenance department.

30. Maintenance employees should make a thorough mechanical inspection of all trucks at least once a month, at which time necessary repairs and parts replacements should be made.

31. Storage batteries used in electric powered hand trucks require regular maintenance and charging service.⁴ Proper equipment should be provided and safe practices in the handling and charging of batteries and in the handling of acids should be observed.

REFERENCES

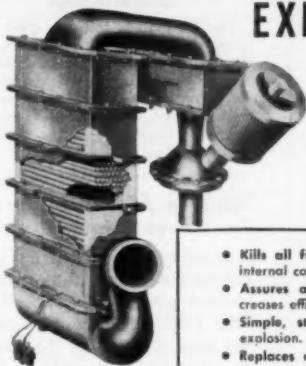
1. *Safety Code for Industrial Power Trucks*, ASA, B56.1, American Standards Association.

2. *Accident Prevention Manual for Industrial Operations*, 2nd edition, National Safety Council.

3. *Industrial Power Trucks*, Safety.

National Safety News, November, 1952

DEATH TO CARBON MONOXIDE, EXHAUST FUMES AND ODORS



OXY-CATALYST, INC.
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Air Pollution Control
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Unit No. 1—Heavy aluminum canister, attractive sign, upright and heavy weighted base for use on floors, aisles, etc.

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HOLDS CAR WHEELS FAST

It will not slip. Reduces danger of costly accidents and injuries.

SAVES TIME

Can be put in position in one quick operation—no ties, blocks or shims necessary.

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No chance of parts being lost. Wedge attached to clamp with strong steel chain; sturdy handle makes carrying easier.

M & M RAIL CLAMP

Order now. Available in two sizes to fit any rail, worn or new; Model A-40 to 100 lb. rail; Model F-110 to 175 lb. rail. *Immediate delivery.*

SAFETY FIRST SUPPLY

COMPANY

425 Magee St.
Pittsburgh 19, Pa.



graph No. 13, National Safety Council.
4. *Storage Batteries*, Data Sheet DEE4, National Safety Council.

ACKNOWLEDGMENT

The first draft of this data sheet was prepared by L. P. Walters, engineering chairman of the Food Section, National Safety Council. It was reviewed by the Safe Practices Conference Committee and approved for publication by the Industrial Conference of the National Safety Council.

Approve ASA Code For Power Forging

A safety code embodying provisions for safety in the use of power-forging machinery for both drop forging and flat-die forging has been approved by the American Standards Association. This document is the *American Standard Safety Code for Forging and Hot Metal Stamping, B24.1-1952*.

The code applies to all classes of power-forging machinery and incidental operations and equipment in connection with such machinery. General requirements are given for working and aisle space, construction of platforms, lighting, head and foot protection, and

safety clothing and safety devices. Specific requirements are included for all hammers, steam and pneumatic hammers, mechanically operated hammers, board drop hammers, and other machines, such as hydraulic presses, cold-trim presses, hot saws, etc. Special provisions are also given with respect to furnaces—the hood, insulation of sides, and pressure release devices.

Accompanying the code is an illustrated appendix giving pictorial evidence of some of the items mentioned in the code, such as location of controls, working platforms, guards, safety devices, positioning of equipment, and the like.

The National Safety Council and the Drop Forging Association sponsored the development of the standard under the procedures of the American Standards Association.

Copies of the Code may be obtained from the American Standards Association, 70 East 45th Street, New York 17, at \$1.00 per copy.

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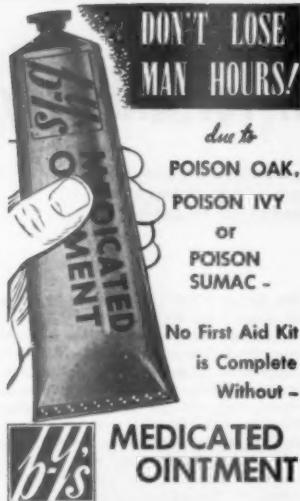


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RANDELS Manufacturing Co.
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National Safety News, November, 1952

Calendar Contest Winners for September

FIRST PRIZE in the National Safety Council's Safety Calendar Contest goes this month to Mrs. Marvin C. Neel of Spokane, Wash. The theme in this contest was to heed warning signs. The limerick follows:
*The sign said, "S-curve ahead—Slow!"
 But they couldn't be bothered, and so—
 With a sway and a swerve,
 They straightened the curve*

Mrs. Neel's line was adjudged the best of all those submitted. It was:
It's their thinking needs straightening, you know!

Second prize went to Willard G. Keast of North Lima, Ohio, for this line:

You'd just guess what's ahead—but signs know.

Third prize was awarded to G. W. Clow of Fredonia, N. Y., for the following line:

Don't be lax, heed the facts those signs show.

Thirty \$5 awards were issued to:
 R. D. Harris, West Palm Beach, Fla.
 Mrs. Esther Koch, Azalea, Ore.

Thomas Morris, Teacher, Pomfret School, Pomfret, Conn.

Mrs. Eunice A. Walker, Jasper, Fla.
 Mrs. Ethel E. Mann, St. Ignace, Mich.

Miss Leora Whitehouse, New Albany, Ind.

Mrs. Charles M. Fay, Warren, R. I.
 Mrs. Violet Hagenbuch, Nazareth, Pa.
 Keith Hixson, Columbus, Ohio.

Mrs. George F. Turner, Kansas City, Mo.

Louis Schneider, Farmer, Clinton, Mo.

R. G. Soulsby, Moline, Ill.

Richard C. Snyder, Office Clerk, Arthur Andersen & Co., Chicago, Ill.

Mrs. B. F. Heidbrink, Denver, Colo.

M. W. Berry, Portland, Ore.

Helen Jennings, Urbana, Ill.

Mrs. Walter Geries, Fresno, Calif.

Mrs. M. Jones, Oregon City, Ore.

Mrs. R. S. Freeman, Chicago.

Mrs. H. L. Parks, Pasadena, Calif.

Mrs. Constance Mecchi, Napa, Calif.

Mr. George R. McFarland, Austin, Tex.

Miss Carole Domann, Abilene, Tex.

Jefferson D. Bates, Alexandria, Va.

Miss Ruth Paris, Stenographer, C. T. Shoe Corp., Lynchburg, Va.

Mrs. Beatrice S. Adams, Richmond, Va.

C. W. Berger, Superintendent, Berry Asphalt Co., Waterloo, Ark.

John Hennessy, No. 10 Maker, Behr Manning Corp., Troy, N. Y.

H. D. Bolster, The Steel Co. of Canada, Limited, Hamilton, Ont., Canada.

Mrs. William Fry, Saran Department, Dow Chemical Co., Midland, Mich.



NEW Sani-Dri Brings You Basic Improvements Never Before Possible!

Amazingly fast drying time—plus the advantage of cleaner, more sanitary washrooms—make the New Sani-Dri popular wherever it is installed.

Now you can be sure of providing fast, efficient hand drying service... and save continuing towel expense. Saves washroom maintenance costs too! No empty towel cabinets to fill. No unsanitary waste containers to empty or become a fire hazard.

The new Sani-Dri is available in two models—No. 8-SWA Hand dryer for washrooms; and No. 8-SWH Hair Dryer for Shower rooms, pools, etc. Both models are easily mounted to the wall and carry the Underwriter's Seal of Approval. Investigate this new faster-drying Sani-Dri today!

ONLY SANI-DRI ELECTRIC DRYERS GIVE YOU ALL THESE FEATURES

- New, improved heating element.
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- New Circuit-Breaker Prevents Damage.
- Cast Construction... Built to Give Years of Service.

Write for New Literature! Send for new illustrated brochure and specification sheets.

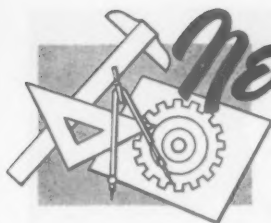
Manufacturers of Sani-Dri, Telsco Bores and Customers for Restaurants and Soda Fountains.

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 NORTH CHICAGO, ILLINOIS



New safety equipment for industry

Manufacturers are invited to send in announcements of new products, or improved special features. Only items which can be considered as "news" to our readers will be published.

Dust Collectors

To meet the requirements of heavy duty, continuous grinding and other high dust volume applications, the Torit Manufacturing Co., St. Paul, Minn., is producing several models of dust collectors with hopper bottoms and special release valves. These are available in both cabinet and cyclone types.

When dust is of a grainy nature, a flexible diaphragm valve is recommended, primarily because of its speed of operation. This new Torit valve is of the Syntro-Mucon flow control type. It can be changed from fully closed to wide open



by merely moving a lever through 180° of arc. Nylon is used for the diaphragm. This valve will stand hard service and may be replaced in a few minutes.

When dusts are of sharp materials, such as shavings, chips, etc., from milling operations, a Torit plate valve is recommended. This type is hinged to the bottom of the hopper, and is faced with rubber. A simple, adjustable locking lever holds it securely against the hopper bottom and prevents air leakage. Full information about these new dust collectors and release valves may be obtained by writing the Torit Manufacturing Co., 291 Walnut St., St. Paul, 2, Minn.
Item No. 1

Cleaner for Aluminum and Tin

Development of Oakite Composition No. 80-A, a material designed for use with aluminum, tin or other soft metals has been announced. This composition, the manufacturers state, has wide applications on a variety of work in aircraft and metal plants where exceptional cleaning ability and safety in use are essential. Material may be used in soak tanks or pressure

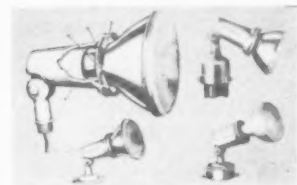
spray washing machines, is readily soluble in hot water, rinses easily with hot or cold water. It does not exhibit any tendency to foam excessively.

Additional information plus helpful data on preparation of solutions, recommended concentrations, methods of application will be sent to readers writing on company letterhead to Oakite Products, Inc., 114D Rector St., New York 6.
Item No. 2

Weatherproof Lamp Holder

A weatherproof lamp holder, designed to prolong lamp life in outdoor lighting has been developed by Stonco Electric Products Co., Kenilworth, N. J., and is identified as the Stonco Cushion-Seal Holder.

The new type of holder makes use of a high temperature, silicon rubber cushion-seal that hugs the neck of the lamp in a tight weatherproof seal that is reported to withstand the highest heat to which the lamp could be subjected and the most adverse weather conditions in outdoor service. By sealing the lamp low at its neck



and by exposing its hot spot area to open air cooling, lamps are reported to burn cooler and longer as they normally would in rated life testing. At the same time, the cushion-seal adapts itself to fit all R-40 and PAR-38 lamps whether long, short or off-center. By cradling the lamp in a rubber cushion grip, the lamp is protected against traffic vibration, shock and other conditions contributing to early lamp failure.

The unit is made of non-corrosive cast aluminum with a glazed porcelain heat-proof socket. The cushion-seal is backed with an impregnated asbestos heat barrier and locked in place by a rigid aluminum reinforcing disc. The unit comes wired with lead wires extending beyond a universally adjustable swivel arm that is threaded 1/2" IPS for mounting to 1/2" pipe, wall bracket, or any of a number of standard interchangeable splice box accessories. It carries UL and CSA approval for use with medium base or mogul reflector lamps in the standard 150,

200, 300, and 500 watt sizes now made by all major lamp manufacturers.

Holders of this type provide brilliant area floodlighting when used in cluster installations for service stations, plant protective lighting, yard and loading platforms, and for areas where pilfering, sabotage, and trespassing are best discouraged by illumination. Single lamp units provide satisfactory supplementary highlighting for many types of outdoor illumination and display.
Item No. 3

Mat Switches

A new line of Switchmats—extended area electrical switches in the form of sheets or thin mats—is announced by the Recora Co., 7419 S. Western Ave., Chicago 36. Available in any size or shape from 2" x 2" to 36" x 144", these switches are actuated by pre-determined pressure ranging from a few ounces to several tons.



Only 3/16" thick, they can be used on floors, platforms, stair treads, etc., without obstructing foot or vehicle traffic. Foot pressure on any part of the area covered by the mat closes the circuit; release of pressure instantly opens it. Mats are hermetically sealed against moisture and weather between vinyl, rubber or neoprene.

Switchmats can handle up to 1 ampere at 110 volts directly, and control the operation of high-voltage high current devices when used in conjunction with the control boxes also manufactured by the Recora Co. Available controls cover types for temporary and permanent installation and provide instantaneous and delayed action. Typical uses are as foot switches for various industrial and commercial electrical equipment; actuators for automatic door operators; interplant traffic controls; safety and production devices for machine operators; entry alarms; automatic lighting of yards, sign and advertising displays; and for many other factory and institution applications.
Item No. 4

"Roll Along" Safety Ladder

The Dayton "Roll Along" safety ladder, is designed for service wherever an easily moved step ladder is required. The "Roll Along" feature provides effortless movement of the ladder in any direction. This

New safety equipment for industry

Further information on these new products and equipment may be obtained by writing direct to the manufacturer or to National Safety News. Accompanying coupon is for your convenience.



ease in moving is made possible by the 3" ball bearing rubber-tired swivel casters which are fitted to the back standards. When ladder is occupied, the weight of the workman permanently holds the ladder stationary. The front standards are equipped with steel ferrule type safety



shoes with rubber suction grip treads which are renewable. The ladder has a wide top shelf for holding tools, boxes, etc. It has an auxiliary platform which gives 9½" additional height when needed, this folds back into main platform when not in use.

These ladders are especially adapted for use in stores, stock rooms, stationery storage rooms and numerous other locations. They are available in 3 ft., 4½ ft., and 6 ft. height from floor to platform. The illustration shows the six-foot size and illustrates the freedom of both hands while working from the rail-guarded platform. For complete information direct inquiries to Dayton Safety Ladder Co., Dept. 15, 2339 Gilbert Ave., Cincinnati, Ohio.

Item No. 5

Humidifier

The Halsey W. Taylor Co., Warren, Ohio, manufacturers of fountains and electric coolers for commercial and industrial use, announces a new product, the Halsey Taylor Air-O-Dryer. This is a portable electrical humidifying unit that controls humidity in homes, stores or commercial structures.

Features such as special evaporator, rubber mountings, three-bladed noiseless fan, quiet ¼ h.p. motor-compressor and single switch control provide this new humidifier with reliable performance. A new booklet

giving full particulars may be had by writing the company.

Item No. 6

Changing Signs

A means of facilitating the changing of copy or changeable copy display signs has been developed in the form of a "mechanical hand" and is being sold by Wagner Sign Service, Inc., distributors only.

This "hand" grasps a Wagner letter and removes it or places it on the sign face by use of a tensioning lever at the end of the handle. The device is particularly useful where the sign is high enough to



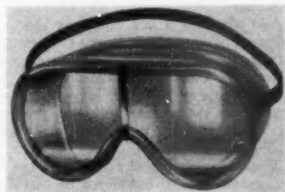
require a ladder. It can be used only with Wagner letters and is available in 10-foot and 14-foot lengths.

The name of the nearest dealer may be obtained from Wagner Sign Service, Inc., 356 S. Hoyne Ave., Chicago 12.

Item No. 7

Eye-Savers

The Model 440 Eye-Savers, recently introduced by the Watchmocket Optical Co., Inc., Providence, R. I., features an extra-wide lens, improved nosebridge design, and a soft plastic frame. The design of the frame and nosebridge makes the



goggles feel light and comfortable for long hours of wear. Weight of goggles is distributed evenly.

Large enough to fit over the largest metal or horn-rimmed glasses, Model 440 gives close-fitting protection. Lens exceeds

federal specifications for impact resistance and optical clarity and protects the eyes from grinding chips, chemical splash, molten metal splatter, etc.

Extra-wide six-inch lens gives picture window vision that's needed for top efficiency. Lens is easily replaceable but can't come loose accidentally; metal lock bar holds it tight. Clear or colored lens is available. Colors are standard lens shades—light, medium or dark green. Front of frame protrudes beyond lens-level; it acts as "bumper" to protect lens surface from scratching when goggles rest on table with lens down. Frame is well ventilated.

For further information and price list, write to Watchmocket Optical Co., Inc., Dept. NI, 232 W. Exchange St., Providence 3, R. I.

Item No. 8

Warning Stand

New senior-size "A" Stand is the latest warning sign at approaches to work areas. To meet the request for an extra-large warning sign, because regular "Men Working" stands often are not visible to drivers, Eastern Metal of Elmira, Inc. now offers a heavier and larger 38-in. high senior-size "A" stand for greater visibility. The same features of 27-in. regular "A" stand are



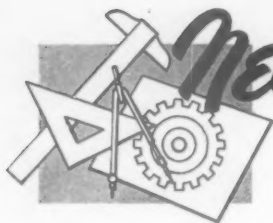
incorporated in the new stand. It is compact, light-weight, easy to store, easily assembled, holds two warning flags, and will not blow over in heavy winds or backwash of passing traffic.

Eight different legends are available. Signs are sprayed with hot baked flexible enamel on heavy gauge bonderized steel. For clarity, legends are silk-screened; they may be reflectorized for 24-hour visibility—at night, in rain or snow. Price quotations may be had by writing Eastern Metal of Elmira, Inc., Elmira Heights, N. Y.

Item No. 9

Electrical Wiring System

A new electrical wiring system, known as Plugmold 2000, is announced by The Wiremold Co., Hartford, Conn.



New safety equipment for industry

Manufacturers are invited to send in announcements of new products, or improved special features. Only items which can be considered as "news" to our readers will be published.

Plugmold 2000 is a steel raceway that carries multiple electrical outlets around the walls of any room and provides an outlet every 30 inches in a continuous run. It is designed for use in both old and new buildings. The great increase in electrical appliances has created a demand for more electrical outlets and often this demand has been met by makeshift wiring and a mass of extension cords, which create both tripping and fire hazards.

The Plugmold raceway is designed to accept Wiremold's pre-wired Snapicoil receptacles for all three wiring services—Duplex 2-wire "hot" receptacles, Duplex 3-wire receptacles with one side switched and one side "hot," and NEMA standard grounded receptacles for appliances fitted with NEMA grounding plugs.

The unit is easily mounted along any wall surface, or along the edge of back-board of work benches or counters. Since it is surface mounted, it can be installed without tearing out walls, partitions, or floors. Full information may be had by writing to Wiremold Co., Hartford 10, Conn.

Item No. 10

Floor Marking Applicator

A new light-weight applicator for applying lane marking tape to industrial and commercial floor areas, is announced by Minnesota Mining and Manufacturing Co., St. Paul.

Tradename "Scotch" brand lane marking applicator, the new unit is designed to



semi-automatically apply strips of "Scotch" brand plastic film tape No. 471 to mark

trucking lanes, aisles, storage areas, and safety zones on floors.

Formerly two maintenance men were needed, and the job required two operations—first laying the tape, then rolling it firmly in place. With the new applicator, only one man is needed, and the tape is applied and rolled in a single step.

To use the new tandem wheeled applicator, consisting of one guide, and one pressure wheel, the operator simply pushes it along the floor with the aid of a waist-high handle. The tape, in widths up to 4 inches, is fed off a roll-holding attachment, under the pressure wheel, and applied to the floor in a continuous strip.

The applicator's pressure wheel is specially engineered to apply the tape smoothly to all types of floor surfaces, including crevices and depressions often found in older wood and concrete floors.

Both applicator and tape are available from paper, mill supply and hardware jobbers. The tape is 2-, 3-, and 4-inch widths on 36 yard rolls.

Item No. 11

Cutting Pliers

New designs of cutting pliers are now offered by Mathias Klein & Sons, Chicago. One is a new oblique plier without the customary top level. With this new design, the entire length of the cutting knives works flush against the cutting surface, permitting a close, clean trim. The plier is more compact than regular oblique patterns and is especially useful for cutting small wires or trimming plastic, or for any work where a small cutting plier is required. A replaceable tempered steel spring keeps the plier in open position for immediate use. Plier is also available without the leaf spring, if preferred. This oblique cutter is hammer forged from high grade tool steel, individually fitted, tempered, adjusted and tested. Available in 5- and 6-inch sizes.

Also offered is a new long nose plier of compact design which is similar, except in size, to the standard Klein long nose plier and is especially designed for use in confined quarters. The long jaws are knurled at the end to insure a positive grip when pressure is applied. Available in 5½-inch size only.

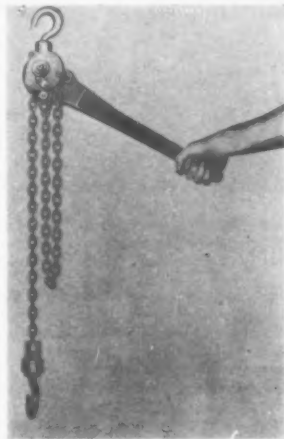
A chain nose plier of compact design is the newest plier to be offered by Mathias Klein & Sons. This plier was designed for precision work in confined places and is a full inch smaller than the standard chain nose plier. It is furnished with a fine knurl that will not damage soft wire. A replaceable tempered steel spring keeps the plier in open position for immediate use without

the necessity of opening by finger. Made in 5-inch size only.

Detailed information on these new tools may be had by writing the manufacturer, Mathias Klein & Sons, 3200 Belmont Ave., Chicago 18.
Item No. 12

Ratchet-Lever Hoist

The new Model R coil-chain ratchet-lever hoist, now in production at Coffing Hoist Company, Danville, Ill., introduces new convenience and safety features. The Model R retains the ratchet and pawl operating principle used in previous models. This type of construction, it is claimed, eliminates the necessity of a friction brake.



The load is suspended on the ratchet and pawl at all times, thus cannot slip, nor will the holding mechanism freeze.

Use of coil instead of roller chain is said to permit the chain to swing or wrap easily in any direction. When not under load, it may be pulled freely through the hoist head for quick adjustment. The handle operates in any position, which solves the problem of working in cramped quarters or where there is little head room. Also, the handle can be operated with either partial or full strokes, depending upon space limitations and desire of the operator. Safety stops prevent spinning of the handle.

The hoist has few parts, and can be disassembled in seconds with only a screwdriver. The unit is available in 1,500- and 3,000-lb. capacities. All load-holding parts are said to be designed to withstand a pull

New safety equipment for industry

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equal to several times rated capacity. In addition, every model is factory-tested at 100 per cent overload. The handle will bend under maximum overload conditions, giving the operator warning to prevent breakage and dropping the load.

Further information is available from the Coffing Hoist Co., 800 Walter St., Danville, Ill.
Item No. 13

Acid Pump

For operations requiring a faster flow of acid, and for those who in some cases must elevate the acid to an approximate height of 12 feet, the new Type C pneumatic acid pump has been designed by Thompson Manufacturing Co., 152 W. 12th St., Erie, Pa. The new pump is a self-contained, portable, compressor and electric motor driven unit fully equipped with safety air valves which prevent the pressure from exceeding 15 lbs.

Plastic tubing is supplied to either transfer acid at floor level, or to overhead tanks by utilizing extension sections of tubing. A handle is conveniently placed on the valve body assembly allowing the operator to hold the assembly firmly in place when air is being forced into the container.

The compressor is lubricated for life, and will not require oiling. If required, the compressor will develop 25 lbs. pressure, can be used for various other purposes around the plant.

As regularly supplied, the pump will fit almost all standard glass carboys, but special plugs and adapters are required to fit some stainless steel, aluminum, and plastic containers. It is therefore necessary to specify type of container and size of opening when ordering.
Item No. 14

Folding Aluminum Scaffold

An innovation in aluminum scaffolding has been announced by The Patent Scaffolding Co., Inc., of Long Island City, N.Y. The new product, known as "Fold-A-Way" scaffold, is a folding aluminum rolling scaffold designed for easy erection and carrying. It is offered in addition to the manufacturer's line of aluminum sectional rolling scaffolds.

"Fold-A-Way" scaffold is made up of tubular frames, with end frames hinged in such a way that the scaffold opens sideways with no member swinging more than 90 degrees. This permits one man to erect or dismantle the base section while stand-

ing within the base area, and prevents danger of collapse or "fold under" during erection. One man, unassisted, can erect the base section in less than a minute. Base,

intermediate and top sections are all pre-assembled, have no loose part, and unfold as described.

The scaffold includes an internal stairway for ascension and adjustable "Lokt-Ring" legs on the base section for use on uneven footing.

For moving the scaffold after erection, the legs are fitted with casters,



which have a simple lever control for locking both wheel and swivel securely. Coped joints are fully welded for maximum strength, and adequate bracing is used to insure rigidity.

These lightweight scaffolds are available in base sections, full and half intermediate sections and guard-rail top sections, permitting them to be built up to required heights. Where desired, "Fold-A-Way" base sections may be fitted with intermediate or top sections of standard aluminum rolling scaffolds without adaptation or adjustment.

For descriptive literature write the Patent Scaffolding Co., Inc., 38-21 12th St., Long Island City 1, N. Y., for Bulletin ASF-1.

Item No. 15

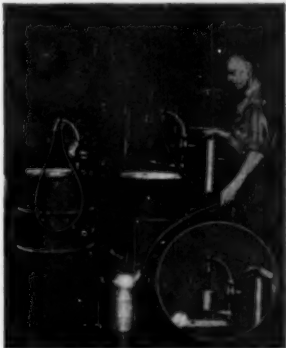
Fire Protective Transfer Pump

Designed for safety from the bottom of the suction tube to the top of the discharge nozzle, the new Protectosol transfer pump provides effective protection against explosion and fire hazards in the movement of hazardous liquids from receiving drums to use containers.

Three flame arrestors are built into the pump. These are placed at the exact points necessary to prevent an explosion of vapors, at the spout, above the bung adaptor and at the strainer inlet within the drum. In addition, the pump provides for vent and pressure relief through protected openings. Design and construction have been engineered to secure safety for the operator as well as the building.

The self-priming pump is constructed of special aluminum alloy with a brass tele-

scopic tube for strength, durability, light weight and resistance to corrosion. It is quickly and easily attached to the drum by hand swivel grip connectors and the tube permits pumping from either the side



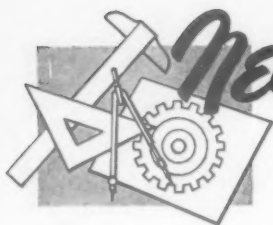
or end opening of 30 gallon or 55 gallon drums. Pumping speed is 5 gallons per minute, fast enough for filling small containers, yet sufficiently slow to prevent sudden overflows. It is supplied with spout containing threaded hose connection, bung adaptor and telescopic suction tube. Tested and approved by Underwriters' Laboratories and Associated Factory Mutual Fire Insurance Cos. Write Protectosol Co., 1920 S. Western Ave., Chicago 8, for full details.

Item No. 16

Car Door Opener

After months of on-the-job testing, the Penco E-Z Way Car Door Opener is now being manufactured and sold through Penco Engineering Co. Designed to open and close "balky" freight car doors, the device is made of high-strength alloy steel with a built-in lift and holding cam. This device exerts a 4,000 pound direct and constant pressure by a "jack action" stroke in the direct line with the opening and closing channel of all types of freight box car doors. The pressure is smooth and will not jerk door off runners.

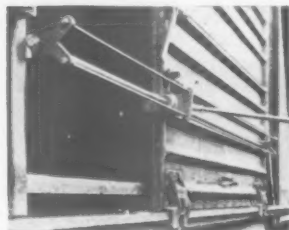
Weighing but 34 pounds, the car door opener can be transported and applied by one man in a matter of seconds. Its features prevent accidents, loss of labor time, freight car and merchandise damages. It meets all safety appliance laws and ICC rules. It opens and closes any car door



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smoothly and easily without pushing or pulling and can be used at any height of

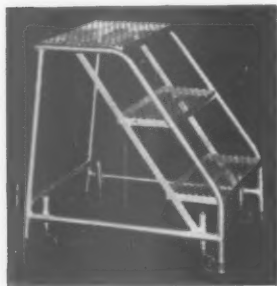


the car door opening, off the ground or off the dock. The "lift and holding cam" does the job without chains. There are no parts to drag around, and the device will last for years with normal handling care.

The car door opener is the invention of a prominent safety engineer connected with one of the leading railroads. Through Penco Distributors, demonstrations are now being made. For full information and literature address Penco Engineering Co., 25 California St., San Francisco 11, Calif. Item No. 17

Steel Ladder

A new improved design welded steel safety ladder, using 1" diameter round furniture tubing is announced by I. D. Cotterman, 4535 N. Ravenswood Ave., Chicago 40.



Four ball bearing swivel brake casters with rubber wheels are provided, which allow the rubber cushioned legs to rest on the floor to prevent rolling when the operator stands on the ladder. When no one is on it, it can be rolled freely.

Steps are 8" deep and top platform is 12" deep, all made from expanded metal, which provides a non-skid surface and remains clean. Made in 2 to 8 steps, 18" to 72" heights, and in either 20" or 26" widths. Platform rails 24" high and hand rails are provided for the higher ladders, but the lower ones can be furnished with or without them. This ladder is finished in bright aluminum.

Item No. 18

Asbestos Cover Mittens

A recent addition to the Emalfon line of work gloves, manufactured by Singer Glove Manufacturing Co. of Chicago, is an insulated mitten for use on extra hot jobs,



which features an asbestos cover which is easily replaced when worn out. The replaceable feature effects a worth-while saving in cost. This two-piece glove consists of a standard Emalfon mitten, and an asbestos cover mitten that is easily slipped on and off. Both mitten and cover are reversible, so they can be worn on either hand.

Item No. 19

Snake Bite Kit

The new, improved Saunders' snake bite kit, adapted and packaged for the Unit System of first aid, is being introduced under exclusive rights by Medical Supply Co., Rockford, Ill. The kit features the patented Saunders' venom suction pump widely used by sportsmen and herpetologists. Suction is accurately controlled. Increased as desired, and easily, quickly administered by the victim alone if necessary.

The complete kit, which is compactly packaged in a plastic case to fit Unit System first aid kits, contains: tourniquet for controlling blood flow; lancet for opening fang punctures; ammonia inhalants for shock; iodine swabs for painting wound area; adhesive bandages and a venom-

suction pump with adapters for treating three sizes and types of areas where a snake might strike a person's body. The kit may be easily carried either in a



standard Unit System first aid kit, in the pocket, or on the belt in a special carrying case.

Along with the improved Saunders' first aid kit, Medical Supply Co. is also introducing for the Unit System a companion first aid kit of the same over-all size as the snake bite kit and packaged in a matching plastic case. It takes up little space in a Unit System first aid kit, or as a pocket unit, or carried on the belt in a carrying case, yet it includes the necessary items for first aid for various emergencies in the field.

These kits are available throughout the U. S. and Canada through leading safety equipment distributors. Complete information may be obtained from any of these distributors or from Medical Supply Co., 1027 W. State St., Rockford, Ill.

Item No. 20

Sound Deadener

Development of Carey Sound Deadener Nos. 40 and 41 is announced by The Philip Carey Manufacturing Co. Production of the emulsion will permit manufacturers of light metal equipment to give their products a heavy solid feeling with sound hushing ability.

The sound deadeners have a fluid consistency, ready for instant application with a wipe-on tool or spray equipment. High solids content speeds drying time. The applied film bonds permanently to metal. Once dry, it can be painted with emulsion type paint. Any quick-setting lacquer or thermo-setting enamel can be sprayed over the emulsion before it has dried. Sound deadeners can be baked at temperatures as high as 325° F. without

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loss of bond, blistering, flow, or without any striking through of the paint, except when light shades of colors are used.

Other advantages include low cost, fire resistance, application without fire-proof spray booths and ventilating systems. Write for complete information to Dept. 401, The Philip Carey Manufacturing Co., Cincinnati 15, Ohio. Item No. 21

Safety Mirrors

A newly developed line of Klear-Vu safety mirrors for industrial use is announced by Lester L. Brossard Co., 540 N. Michigan Ave., Chicago 11. They are designed for use in factories where blind



corners, cross aisle intersections, entrances and exits present a safety problem because of traffic.

Installed in these locations, at a height of 8 to 10 feet, the mirrors clearly reflect the movement of oncoming floor traffic from opposite directions, thereby removing the principal cause of collisions. The mirrors are easily installed and are adjusted for setting at any desired angle. Diameter dimensions of two circular convex glass mirrors offered are 12" and 18". Two sizes are offered in flat rectangular glass mirrors, 9" x 18" and 16" x 24". These mirrors are also adaptable for use on various types of production machinery and equipment.

Item No. 22

Plastic Safety Goggle

A plastic safety goggle trademarked Saf-I-Flex has been developed by United States Safety Service Co. It is claimed

that through new design and using new and improved materials that this goggle offers features of added comfort, strength and durability.

A newly designed frame of pliable Vinyl has rolled edges where it contacts the face and new type grid ventilation which makes

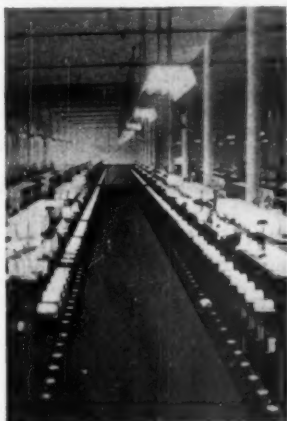


the goggle unusually comfortable and fog free. The clear frame permits full side vision. The new style lens can be easily and quickly changed. It locks securely into the frame channel at 7 different points and is optically correct.

It is claimed that the Saf-I-Flex exceeds Federal Specifications for impact resistance and strength. It will fit over the widest type personal glasses and is light in weight (1.7 ounces). For information write United States Safety Service Co., Kansas City 6, Mo. Item No. 23

Plastic Flooring Compound

A new quick drying plastic flooring compound for use in repairing and re-



surfacing wooden floors is announced by The Monroe Co., Inc., Cleveland. Called

Rezilo because of its resiliency, the product contains cohesive resins which bind it firmly to wooden floor surfaces without the use of metal binders. It is suggested for aisles and work areas where personnel walk and stand, as well as for areas subjected to heavy trucking.

Rezilo is easily applied and can be used immediately after application. It has a smooth, hard surface which is easily trucked over and withstands heavy loads. It is also recommended for use indoors or outdoors on ramps, trucking aisles, loading docks and warehouse floors. It is furnished ready to use without mixing or thinning. It does not require troweling, and is applied by priming, screeding and rolling. Write to The Monroe Co., Inc., 10703 Quebec Ave., Cleveland 6, Ohio for more complete information. Item No. 24

Floor Machine

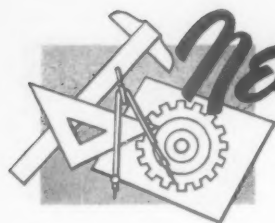
The new K-13 floor machine with a single 13-inch diameter brush and both balanced power and floating power is announced by The Kent Co.

This all-weight-on-the-brush type machine performs all floor maintenance



functions, including scrubbing, polishing, buffing, and steel-wooling. It has a minimum of moving parts, is gear-driven, has only two gears, both running in a continuous bath of grease. Floating power reduces the strain on moving parts produced by the starting torque. Two ball bearings support the armature, two amply large tapered roller bearings in the base support the entire weight of the machine. Balanced power provides ease of operation and less fatigue for the operator, yet the K-13 exerts 80 pounds pressure on the floor through its brush surface. The handle, which is adjustable to any height operator, has an automatic safety switch operated by either or both hands.

Further information may be obtained from the Kent Co., Inc., 415 Canal St., Rome, N. Y. Item No. 25



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single or double face. Silk screen painting on inside of glass provides for easy cleaning of the face with a dust cloth. Weather will not damage the sign which is of rust-proof metal construction. Sign can be mounted on post or pole and lettering can be changed for any other purpose, such as "Right Turn Only, Do Not Enter," or any other appropriate legend. Can be plainly seen in daylight with bulbs out. Item No. 26

Jumper Protector

Development of a plastic insulating protector for mechanical jumpers used on power lines is announced by the Charleston Rubber Co., Charleston, S. C. This protector was devised to solve the dual problems of protecting the insulated jumper cable from damage while on the truck or in use and also of protecting the lineman from accidental contact with a defective, energized jumper.

This jumper protector is extruded from a Charcolite plastic, is bright yellow with high visibility, is resistant to oil, grease, water, ozone, corona, sunlight or freezing. It is extremely light in weight, 1 1/2 oz. per foot, and will pass a 10,000-volt test. It fits all jumper cables up to 1 1/4" in diameter.

The protector also permits damaged jumpers to be safely placed back in serv-



ice and provides another safeguard for the lineman even on new jumpers. The protector and jumper may be tested as a unit or the protector removed, looped through the testing tank and filled with water to provide the second electrode. Item No. 27

Glass Tubing Handling Device

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Grip-Safe eliminates the necessity of wrapping cloth or rag around tubing before inserting in rubber stopper or corks. The device holds glass tubing firmly with light pressure, permits tubing to be inserted easily and quickly into rubber stoppers without breakage. It handles irregular shaped tubing such as Ts and Ls, etc., easily and quickly. Even if the tubing breaks, the device protects the

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Bridgeport Chain is one of the Round Chain Cos. Other companies in the group are located in Trenton, N. J.; Cleveland, Ohio; Chicago; Birmingham, Ala.; Seattle; So. San Francisco and Los Angeles.

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The Industrial-Aviation Division of the R. M. Hollingshead Corp., Camden, N. J., has been re-classified and in the future will be known as the Industrial Division, according to an announcement by vice-president in charge of sales, Donald O. Severson.

The Industrial Division will sell and merchandise a complete line of specialty oils, specification corrosion preventives, aviation maintenance products, sanitary maintenance products, non-flammable hydraulic fluid, and plastic coatings.

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425 N. Michigan Ave., Chicago 11, Ill.

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Trade publications

in the safety field

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1. "Use and Care of Wire Rope": Up-to-date guide on proper methods of handling, reeving, breaking in, splicing, cutting, lubricating, and specifying wire rope. Included are illustrations, and charts to demonstrate and explain suggestions and recommendations for proper wire rope use and care. A. Leschen & Sons Co.

2. Safety Shoes: Colorful catalog describes and illustrates complete line of "drem" and work steel-toe safety shoes. New styles are featured equipped with air cushioned innersoles of foam latex. Safety First Shoe Co.

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6. Industrial Work Clothing: Folder illustrates shirts, trousers, coveralls, laboratory coats made of Dynel to resist acids and caustics. American Allsafe Co., Inc.

7. "Gripper" Woven Wire Slings: Catalog and price list gives complete data on the three major specifications to which the slings are made, information on recommended uses and loading data. Cambridge Wire Cloth Co.

8. "Ambulance and First Aid Equipment": Catalog No. 54 describes and illustrates ambulance cots, chair-cots, stretchers, chairs, mattresses, pillows, etc., together with specifications. Bomgardner Manufacturing Co.

9. "Slings": Catalog S-8 includes comprehensive engineering specifications on round braided, flat braided and standard slings ranging in safe load capacities from 1/2 to 140 tons. This 100-page book is available to men in charge of overhead materials handling. Macwhythe Co.

10. Steel Scaffolding Equipment: Folder illustrates maintenance scaffolding, sectional steel scaffolding and allied equipment, including material hoisting towers and elevators. Applications and specifications of each are covered. Wilson-Albrecht Co., Inc.

11. "Everything For Safety": Catalog No. 100 describes face shields, welding helmets, supersight magnifiers, skin coat liquids and creams for protection against skin infections—safety clothing, machine guards, etc. Boyer-Campbell Co.

12. Manually Propelled Hydraulic Lift Truck: Brochure describes and illustrates the 1000-pound capacity lift truck, construction features, hydraulic pump operation and lists specifications on material and design. Century Products Co.

13. "The Design and Layout of Industrial Changerooms": 16-page illustrated booklet discusses architectural standards, dimensioning, equipment and safety. Photographs of changerooms and sketches are included to indicate many of the details in laying out the entire room. The Moore Co.

14. Floor Maintenance: Circular explains the operation of the patented Hild shower-feed brush which improves floor scrubbing efficiency and permits rugs and carpeting to be shampooed without removing from the floor. Hild Floor Machine Co.

15. "Protect Against Combustible Gas": Folder presents portable indicator for gas detection, also portable audible alarm and combustible gas alarm for fixed locations. Also describes style and principles of operation; lists accessories and spare parts. Johnson-Williams, Ltd.

16. "The Control of Dermatitis in Industry": Booklet presents a simple, inexpensive prevention and control program for personal cleanliness, protecting exposed skin areas, preventing clothing contamination, and guarding against special hazards. West Disinfecting Co.

17. "Over the Rough Spots": Manual on building maintenance tells how to patch holes or resurface any type floor; how to check water seepage in underground foundations; repair leaky roofs; preserve concrete or wood surfaces. Stonhard Co.

18. "Buyers Guide of Fyr-Fyter Equipment": Illustrates a complete line of fire protection equipment for every type of fire hazard, and describes applications, special features, construction details and pertinent specifications. Fyr-Fyter Co.

19. Construction Data Hand Book: Presents engineering data and specifications on products of building maintenance, construction and decoration. Materials for caulking, roofing, flooring and floor treatments, moisture repellents, paints and enamels. A. C. Horn, Inc.

20. Heavy Duty Cleaner: Literature on industrial portable cleaner for fast, thorough pick-up of litter. Can also be converted to a blower or wet cleaning. General Electric Co.

21. Face Shields: Booklet illustrates various types and sizes of shields such as open top, helmet type, and wire screen with recommendations on which to use specific jobs. Chicago Eye Shield Co.

NATIONAL SAFETY NEWS

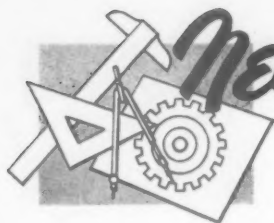
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9. "Slings": Catalog S-8 includes comprehensive engineering specifications on round braided, flat braided and standard slings ranging in safe load capacities from 1/2 to 140 tons. This 100-page book is available to men in charge of overhead materials handling. Macwhyte Co.

10. Steel Scaffolding Equipment: Folder illustrates maintenance scaffolding, sectional steel scaffolding and allied equipment, including material hoisting towers and elevators. Applications and specifications of each are covered. Wilson-Albrecht Co., Inc.

11. "Everything For Safety": Catalog No. 100 describes face shields, welding helmets, supersight magnifiers, skin coat liquids and creams for protection against skin infections—safety clothing, machine guards, etc. Boyer-Campbell Co.

12. Manually Propelled Hydraulic Lift Truck: Brochure describes and illustrates the 1000-pound capacity lift truck, construction features, hydraulic pump operation and lists specifications on material and design. Century Products Co.

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